SAFETY DATA SHEET

1. Identification

Product identifier: LACTELISA BLV AB BI Indirect Tank 250

Recommended use of the chemical and restrictions on use

- Recommended use: Veterinary product used as diagnostic aid
- Restrictions on use: Not for human use

Details of manufacturer or importer

- Company Name (AU): Zoetis Australia Pty Ltd
  - ABN 94 156 476 425
  - Level 6, 5 Rider Boulevard
  - Rhodes NSW 2138 AUSTRALIA
- Tel: 1800 814 883
- Fax: (02) 8876 0444
- Email: australia.animalhealth@zoetis.com
- Emergency Phone: 1800 814 883 (all hours)
- Police and Fire Brigade: Dial 000
- If ineffective: Dial Poisons Information Centre (13 1126 from anywhere in Australia)

2. Hazard(s) identification

Classification of the hazardous chemical

- Physical hazards: Flammable liquids - Category 3
- Health hazards: Skin corrosion/irritation - Category 1
  - Serious eye damage/eye irritation - Category 1
- Environmental hazards: Hazardous to the aquatic environment, acute hazard - Category 3
  - Hazardous to the aquatic environment, long-term hazard - Category 3

Label elements, including precautionary statements

- Hazard symbol(s): Flame Corrosion
- Signal word: Danger
- Hazard Statement(s): Flammable liquid and vapour. Causes severe skin burns and eye damage. Harmful to aquatic life with long lasting effects.
- Precautionary Statement(s):
  - Prevention: Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Do not breathe mist or vapour. Wash thoroughly after handling. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.
  - Response: IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE or doctor/physician. Wash contaminated clothing before reuse. In case of fire: Use appropriate media for extinction.
  - Storage: Store in a well-ventilated place. Keep cool. Store locked up.
  - Disposal: Dispose of contents/container in accordance with local/regional/national/international regulations.
Other hazards which do not result in classification

None known.

Supplemental information

Handle as potentially infectious. Vapours may cause drowsiness and dizziness. Exposure to strong inorganic mists containing sulfuric acid may cause cancer by inhalation. See section 11 for further explanation.

3. Composition/information on ingredients

Mixture

<table>
<thead>
<tr>
<th>Identity of chemical ingredients</th>
<th>CAS number and other unique identifiers</th>
<th>Concentration of ingredients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol (Peroxidase substrate)</td>
<td>64-17-5</td>
<td>15-25</td>
</tr>
<tr>
<td>Sulfuric acid (Stop solution)</td>
<td>7664-93-9</td>
<td>11</td>
</tr>
<tr>
<td>Isopropanol (Peroxidase substrate)</td>
<td>67-63-0</td>
<td>5-15</td>
</tr>
<tr>
<td>Thimerosal</td>
<td>54-64-8</td>
<td>&lt;0.1</td>
</tr>
</tbody>
</table>

4. First-aid measures

Description of necessary first aid measures

**Inhalation**
Move to fresh air. Call a physician if symptoms develop or persist.

**Skin contact**
Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control centre immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.

**Eye contact**
Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control centre immediately.

**Ingestion**
Call a physician or poison control centre immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn’t get into the lungs.

Personal protection for first-aid responders
For personal protection, see section 8 of the SDS. Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

Symptoms caused by exposure
Narcosis. Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Medical attention and special treatment
Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

5. Fire-fighting measures

**Extinguishing media**
Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

**Suitable extinguishing media**
Do not use water jet as an extinguisher, as this will spread the fire.

**Unsuitable extinguishing media**
Vapours may form explosive mixtures with air. Vapours may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.

**Special protective equipment and precautions for fire fighters**
Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Fire fighting equipment/instructions**
In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.

**Hazchem Code**
None.

**General fire hazards**
Flammable liquid and vapour.

**Specific methods**
Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental release measures

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

**For non-emergency personnel**
Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained.
For emergency responders
Keep unnecessary personnel away. Ensure adequate ventilation. Wear appropriate protective equipment and clothing during clean-up. Handle as potentially infectious. Do not breathe mist or vapour. Avoid contact with eyes, skin, and clothing. Ventilate the contaminated area. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Environmental precautions
Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

Methods and materials for containment and cleaning up
Ensure adequate ventilation. Avoid inhalation of vapours or mists. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Prevent product from entering drains. Clean contaminated surface thoroughly. Prevent release to the environment.

Large Spills: Stop the flow of material, if this is without risk. Collect spill with an inert, non-combustible absorbent material and transfer to labeled container for disposal. Clean contaminated surface thoroughly. Prevent release to the environment.

Small Spills: Absorb spillage with non-combustible, absorbent material. Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

7. Handling and storage

Flammable liquid and vapour. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Corrosive material. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Do not use in areas without adequate ventilation. Wear appropriate personal protective equipment. Wash thoroughly after handling.

Wash contaminated clothing before reuse. Avoid release to the environment. Do not empty into drains. Observe good industrial hygiene practices. Handle as potentially infectious.

Precautions for safe handling
Keep containers tightly closed in a cool, well-ventilated place. 2 - 8˚C (36 - 46˚F). Do not freeze. Store locked up. Protect from sunlight. Do not handle or store near an open flame, heat or other sources of ignition. Store away from incompatible materials (see Section 10 of the SDS). Use care in handling/storage.

Conditions for safe storage, including any incompatibilities

8. Exposure controls and personal protection
Follow standard monitoring procedures.

Control parameters

Occupational exposure limits

Australia. National Workplace OELs (Workplace Exposure Standards for Airborne Contaminants, Appendix A)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol (Peroxidase substrate) (CAS 64-17-5)</td>
<td>TWA</td>
<td>1880 mg/m3</td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>1000 ppm</td>
</tr>
<tr>
<td>Isopropanol (Peroxidase substrate) (CAS 67-63-0)</td>
<td>TWA</td>
<td>1230 mg/m3</td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>500 ppm</td>
</tr>
<tr>
<td>Sulfuric acid (Stop solution) (CAS 7664-93-9)</td>
<td>STEL</td>
<td>3 mg/m3</td>
</tr>
<tr>
<td>Thimerosal (CAS 54-64-8)</td>
<td>STEL</td>
<td>0.03 mg/m3</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>0.01 mg/m3</td>
</tr>
</tbody>
</table>

Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol (Peroxidase substrate) (CAS 64-17-5)</td>
<td>TWA</td>
<td>1880 mg/m3</td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>1000 ppm</td>
</tr>
<tr>
<td>Isopropanol (Peroxidase substrate) (CAS 67-63-0)</td>
<td>TWA</td>
<td>1230 mg/m3</td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>500 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>983 mg/m3</td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>400 ppm</td>
</tr>
</tbody>
</table>

Material name: LACTELISA BLV AB BI Indirect Tank 250

SDS AUSTRALIA

3334
### Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid (Stop solution) (CAS 7664-93-9)</td>
<td>STEL</td>
<td>3 mg/m³</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>1 mg/m³</td>
</tr>
<tr>
<td>Thimerosal (CAS 54-64-8)</td>
<td>STEL</td>
<td>0.03 mg/m³</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>0.01 mg/m³</td>
</tr>
</tbody>
</table>

### US. ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol (Peroxidase substrate) (CAS 64-17-5)</td>
<td>STEL</td>
<td>1000 ppm</td>
<td></td>
</tr>
<tr>
<td>Isopropanol (Peroxidase substrate) (CAS 67-63-0)</td>
<td>STEL</td>
<td>400 ppm</td>
<td></td>
</tr>
<tr>
<td>Sulfuric acid (Stop solution) (CAS 7664-93-9)</td>
<td>TWA</td>
<td>200 ppm</td>
<td>Thoracic fraction.</td>
</tr>
<tr>
<td>Thimerosal (CAS 54-64-8)</td>
<td>STEL</td>
<td>0.03 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>0.01 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

### UK. EH40 Workplace Exposure Limits (WELs)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol (Peroxidase substrate) (CAS 64-17-5)</td>
<td>TWA</td>
<td>1920 mg/m³</td>
</tr>
<tr>
<td>Isopropanol (Peroxidase substrate) (CAS 67-63-0)</td>
<td>STEL</td>
<td>1250 mg/m³</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>500 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>999 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>400 ppm</td>
</tr>
<tr>
<td>Sulfuric acid (Stop solution) (CAS 7664-93-9)</td>
<td>TWA</td>
<td>0.05 mg/m³</td>
</tr>
</tbody>
</table>

### Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol (Peroxidase substrate) (CAS 64-17-5)</td>
<td>TWA</td>
<td>960 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Isopropanol (Peroxidase substrate) (CAS 67-63-0)</td>
<td>TWA</td>
<td>500 ppm</td>
<td></td>
</tr>
<tr>
<td>Sulfuric acid (Stop solution) (CAS 7664-93-9)</td>
<td>TWA</td>
<td>0.1 mg/m³</td>
<td>Inhalable fraction.</td>
</tr>
</tbody>
</table>

### Biological limit values

<table>
<thead>
<tr>
<th>Components</th>
<th>Value</th>
<th>Determinant</th>
<th>Specimen</th>
<th>Sampling time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropanol (Peroxidase substrate) (CAS 67-63-0)</td>
<td>25 mg/l</td>
<td>Aceton</td>
<td>Urine</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>25 mg/l</td>
<td>Aceton</td>
<td>Blood</td>
<td>*</td>
</tr>
</tbody>
</table>

* - For sampling details, please see the source document.

### ACGIH Biological Exposure Indices

<table>
<thead>
<tr>
<th>Components</th>
<th>Value</th>
<th>Determinant</th>
<th>Specimen</th>
<th>Sampling time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropanol (Peroxidase substrate) (CAS 67-63-0)</td>
<td>40 mg/l</td>
<td>Acetone</td>
<td>Urine</td>
<td>*</td>
</tr>
</tbody>
</table>

* - For sampling details, please see the source document.

### Exposure guidelines

**Australia OELs: Skin designation**

Thimerosal (CAS 54-64-8) Can be absorbed through the skin.

Material name: LACTELISA BLV AB BI Indirect Tank 250 SDS AUSTRALIA 3334 4 / 11
US ACGIH Threshold Limit Values: Skin designation
Thimerosal (CAS 54-64-8) Can be absorbed through the skin.

Appropriate engineering controls
Ensure adequate ventilation, especially in confined areas. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. General ventilation normally adequate. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, for example personal protective equipment (PPE)

Eye/face protection
Wear safety glasses with side shields (or goggles) and a face shield.

Skin protection
Wear appropriate chemical resistant gloves.

Hand protection
Wear suitable protective clothing. Use protective clothing (uniforms, lab coats, disposable coveralls, etc.) in both production and laboratory areas.

Respiratory protection
No personal respiratory protective equipment normally required. In case of insufficient ventilation, wear suitable respiratory equipment. If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Thermal hazards
Not applicable.

Hygiene measures
When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Liquid.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Liquid.</td>
</tr>
<tr>
<td>Colour</td>
<td>Not available.</td>
</tr>
<tr>
<td>Odour</td>
<td>Not available.</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>Not available.</td>
</tr>
<tr>
<td>pH</td>
<td>Not available.</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

Initial boiling point and boiling range
135 °C (275 °F) estimated

Flash point
31.0 °C (87.8 °F) estimated

Evaporation rate
Not available.

Flammability (solid, gas)
Not applicable.

Upper/lower flammability or explosive limits

| Flammability limit - lower (%) | Not available. |
| Flammability limit - upper (%) | Not available. |
| Explosive limit - lower (%)   | Not available. |
| Explosive limit – upper (%)   | Not available. |

Vapour pressure
Not available.

Relative density
Not available.

Solubility(ies)

| Solubility (water) | Not available. |
| Partition coefficient (n-octanol/water) | Not available. |
| Auto-ignition temperature | Not available. |

Material name: LACTELISA BLV AB BI Indirect Tank 250 3334 SDS AUSTRALIA 5 / 11
Decomposition temperature  Not available.
Viscosity  Not available.

Other physical and chemical parameters
Explosive properties  Not explosive.
Oxidising properties  Not oxidising.

10. Stability and reactivity
Reactivity  The product is stable and non-reactive under normal conditions of use, storage and transport. Reacts violently with strong alkaline substances. This product may react with reducing agents.
Chemical stability  Stable under normal conditions of use.
Possibility of hazardous reactions  No dangerous reaction known under conditions of normal use. Hazardous polymerisation does not occur.
Conditions to avoid  Contact with incompatible materials. Do not mix with other chemicals. Avoid temperatures exceeding the flash point. Protect from sunlight. Keep away from heat, spark, open flames and other sources of ignition. Keep away from combustible material.
Hazardous decomposition products  Irritating and/or toxic fumes and gases may be emitted upon the product's decomposition. Thermal decomposition products may include oxides of carbon, nitrogen, and sulfur.

11. Toxicological information
Information on possible routes of exposure
Inhalation  May cause drowsiness and dizziness. May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
Skin contact  Causes severe skin burns. Severity: Severe
Sulfuric acid (Stop solution)  Species: Rabbit
Isopropanol (Peroxidase substrate)  Severity: Mild

Eye contact  Causes serious eye damage.
Sulfuric acid (Stop solution)  Severity: Severe
Thimerosal  Species: Rabbit
Severity: Mild
Ethanol (Peroxidase substrate)  Species: Rabbit
Severity: Severe
Isopropanol (Peroxidase substrate)  Species: Rabbit
Severity: Severe

Ingestion  Causes digestive tract burns.

Symptoms related to exposure  Narcosis. Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Acute toxicity
Components  Species  Test results
Ethanol (Peroxidase substrate) (CAS 64-17-5)

Acute
Inhalation
LC50  Mouse  39 g/m³, 4 hours
Rat  20000 ppm, 10 hours

Oral
LD50  Mouse  3450 g/m³ Intravitreal (eye)
Rat  7060 mg/kg
<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropanol (Peroxidase substrate)</td>
<td>Rat</td>
<td>20000 mg/l Intravitreal (eye)</td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Dermal</strong></td>
<td>Rabbit</td>
<td>Mild Irritation</td>
</tr>
<tr>
<td>LD50</td>
<td>Rabbit</td>
<td>12800 mg/kg</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td>Rat</td>
<td>16000 ppm, 8 hours</td>
</tr>
<tr>
<td>LC50</td>
<td></td>
<td>30 mg/l</td>
</tr>
<tr>
<td><strong>Oral</strong></td>
<td>Mouse</td>
<td>3600 mg/kg</td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>&gt; 2000 mg/kg</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td>Rabbit</td>
<td>Ocular, Severe irritation</td>
</tr>
<tr>
<td><strong>Chronic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td>Rat</td>
<td>4000 ppm, 20 weeks Liver Central nervous system</td>
</tr>
<tr>
<td>NOAEL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfuric acid (Stop solution)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td>Rat</td>
<td>510 mg/m3, 2 hours</td>
</tr>
<tr>
<td>LD50</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Oral</strong></td>
<td>Rat</td>
<td>2140 mg/kg</td>
</tr>
<tr>
<td>Thimerosal (CAS 54-64-8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Oral</strong></td>
<td>Mouse</td>
<td>91 mg/kg</td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>75 mg/kg</td>
</tr>
<tr>
<td><strong>Subcutaneous</strong></td>
<td>Rat</td>
<td>98 mg/kg</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td></td>
<td>Causes severe skin burns and eye damage.</td>
</tr>
<tr>
<td><strong>Corrosivity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfuric acid (Stop solution)</td>
<td></td>
<td>Severity: Corrosive</td>
</tr>
<tr>
<td><strong>Serious eye damage/irritation</strong></td>
<td></td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td><strong>Eye contact</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfuric acid (Stop solution)</td>
<td></td>
<td>Severity: Severe</td>
</tr>
<tr>
<td>Thimerosal</td>
<td></td>
<td>Species: Rabbit, Severity: Mild</td>
</tr>
<tr>
<td>Ethanol (Peroxidase substrate)</td>
<td></td>
<td>Species: Rabbit, Severity: Severe</td>
</tr>
<tr>
<td>Isopropanol (Peroxidase substrate)</td>
<td></td>
<td>Species: Rabbit, Severity: Severe</td>
</tr>
<tr>
<td>Respiratory or skin sensitisation</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Respiratory sensitisation</strong></td>
<td></td>
<td>Not a respiratory sensitizer.</td>
</tr>
<tr>
<td><strong>Skin sensitisation</strong></td>
<td></td>
<td>This product is not expected to cause skin sensitisation.</td>
</tr>
</tbody>
</table>
Germ cell mutagenicity

No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Mutagenicity

Isopropanol (Peroxidase substrate)

Bacterial Mutagenicity (Ames)
Result: negative
Species: Salmonella

In Vitro Sister Chromatid Exchange
Result: negative

Mammalian Cell Mutagenicity
Result: negative
Species: HGPRT Chinese Hamster Ovary (CHO cells)

Carcinogenicity

Based on available data, the classification criteria are not met. The International Agency for Research on Cancer (IARC) and the United States National Toxicology Program (NTP) have classified 'occupational exposure to strong inorganic acid mists containing sulfuric acid' as a known human carcinogen. This classification applies only to sulfuric acid when generated as a mist. This classification is debated within the scientific community and there is disagreement as to whether or not a cause and effect relationship between cancer and 'occupational exposure to strong inorganic acid mists containing sulfuric acid' exists.

ACGIH Carcinogens

Isopropanol (Peroxidase substrate) (CAS 67-63-0) A4 Not classifiable as a human carcinogen.
Sulfuric acid (Stop solution) (CAS 7664-93-9) A2 Suspected human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

Sulfuric acid (Stop solution) (CAS 7664-93-9) 1 Carcinogenic to humans.

Reproductive toxicity

This product is not expected to cause reproductive or developmental effects.

Developmental effects

Isopropanol (Peroxidase substrate)

1200 mg/kg/day Prenatal & Postnatal Development, No effects at maximum dose
Result: NOAEL
Species: Rat
Organ: Oral

7000 ppm Prenatal & Postnatal Development, Maternal toxicity Fetotoxicity Embryotoxicity
Result: LOAEL
Species: Rat
Organ: Inhalation

Reproductivity

Isopropanol (Peroxidase substrate)

1000 mg/kg/day 2 Generation Reproductive Toxicity, Maternal Toxicity Fetal mortality
Result: LOAEL
Species: Rat
Organ: Oral

Specific target organ toxicity - single exposure
Not classified.

Specific target organ toxicity - repeated exposure
Not classified.

Aspiration hazard
Not an aspiration hazard.

Chronic effects
Prolonged inhalation may be harmful.

Other information
Handle as potentially infectious.

12. Ecological information

Ecotoxicity
Harmful to aquatic life with long lasting effects. Avoid release to the environment.

Components

<table>
<thead>
<tr>
<th>Material name: LACTELISA BLV AB BI Indirect Tank 250 3334</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDS AUSTRALIA</td>
</tr>
<tr>
<td>----------------------------------------------------------</td>
</tr>
<tr>
<td>Ethanol (Peroxidase substrate) (CAS 64-17-5)</td>
</tr>
<tr>
<td>LC50</td>
</tr>
<tr>
<td>Fingerling Trout</td>
</tr>
<tr>
<td>11200 mg/l, 24 Hours</td>
</tr>
<tr>
<td>Oncorhynchus mykiss (Rainbow Trout)</td>
</tr>
<tr>
<td>12900 mg/l, 96 Hours</td>
</tr>
</tbody>
</table>
### Components Test results

<table>
<thead>
<tr>
<th>Species</th>
<th>Test results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pimephales promelas (Fathead Minnow)</td>
<td>14200 mg/l, Hours</td>
</tr>
<tr>
<td>Water flea (Daphnia magna)</td>
<td>7.7 - 11.2 mg/l, 48 hours</td>
</tr>
<tr>
<td>Fathead minnow (Pimephales promelas)</td>
<td>&gt; 100 mg/l, 96 hours</td>
</tr>
<tr>
<td>Bluegill (Lepomis macrochirus)</td>
<td>&gt; 1400 mg/l, 96 hours</td>
</tr>
<tr>
<td>Daphnia magna (Water Flea)</td>
<td>29 mg/l, 24 Hours</td>
</tr>
<tr>
<td>Brachydanio rerio (Zebra fish)</td>
<td>&gt; 500 mg/l, 96 Hours</td>
</tr>
<tr>
<td>Algae</td>
<td>&gt; 100 mg/l, 72 hours</td>
</tr>
<tr>
<td>Daphnia</td>
<td>&gt; 100 mg/l, 48 hours (nominal)</td>
</tr>
<tr>
<td>Bluegill (Lepomis macrochirus)</td>
<td>16 - 28 mg/l, 96 hours</td>
</tr>
</tbody>
</table>

### Aquatic

#### Crustacea
- **EC50**
  - Water flea (Daphnia magna)
  - > 100 mg/l, 48 hours

#### Fish
- **LC50**
  - Fathead minnow (Pimephales promelas)
  - > 100 mg/l, 96 hours

Isopropanol (Peroxidase substrate) (CAS 67-63-0)

- **Aquatic**
  - **Fish**
    - **LC50**
      - Bluegill (Lepomis macrochirus)
      - > 1400 mg/l, 96 hours

Sulfuric acid (Stop solution) (CAS 7664-93-9)

- **Aquatic**
  - **EC50**
    - Daphnia magna (Water Flea)
    - 29 mg/l, 24 Hours
  - **LC50**
    - Brachydanio rerio (Zebra fish)
    - > 500 mg/l, 96 Hours

### Persistence and degradability

**Bioaccumulative potential**

No data available for this product.

**Mobility in soil**

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

### 13. Disposal considerations

**Disposal methods**

Handle as potentially infectious. Avoid release to the environment. Do not discharge into drains, water courses or onto the ground. Do not allow this material to drain into sewers/water supplies. Considering the relevant known environmental and human health hazards of the material, review and implement appropriate technical and procedural waste water and waste disposal measures to prevent occupational exposure and environmental release. It is recommended that waste minimization be practiced. The best available technology should be utilized to prevent environmental releases. This may include destructive techniques for waste and wastewater. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Residual waste**

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging**

Do not re-use empty containers. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

### 14. Transport information

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not established.

**General information**

This product contains 2 separately packaged, non-reactive hazardous materials (Sulfuric Acid Stop Solution and Peroxidase Substrate) that each meet the definition of a dangerous good (DG) for transport. The DG descriptions for each container are included hereunder.

The Sulfuric Acid Stop Solution DG description is Sulfuric acid solution, UN2796, 8, II.

The Peroxidase Substrate DG description is Flammable liquids, n.o.s. (Ethanol, Isopropanol), UN1993, 3, III.

Both materials, when packaged in inner containers of 30 milliliters or less, can qualify for the Excepted Quantity provisions of the transport regulations. Refer to the ICAO/IATA, IMDG, ADR, and US DOT regulations for details.

If Peroxidase Substrate is packaged in a container >30 milliliters but ≤50 milliliters, this material and, as such, this kit can qualify for the Limited Quantity provisions of the ground, ocean (sea) and air transport regulations.
15. Regulatory information

Safety, health and environmental regulations

National regulations

This Safety Data Sheet was prepared in accordance with Australia Model Code of Practice for the preparation of Safety Data Sheets for Hazardous Chemicals (23/12/2011).

Australia Medicines & Poisons Appendix B
ALCOHOL, DEHYDRATED (CAS 64-17-5)

Australia Medicines & Poisons Appendix E
Mercury, organic compounds (CAS 54-64-8)
SULFURIC ACID (CAS 7664-93-9)

Australia Medicines & Poisons Appendix F
SULFURIC ACID (CAS 7664-93-9)

Australia Medicines & Poisons Appendix G
Mercury (CAS 54-64-8)

Australia Medicines & Poisons Schedule 2
Mercury (CAS 54-64-8)

Australia Medicines & Poisons Schedule 6
SULFURIC ACID (EXCLUDING ITS SALTS AND DERIVATIVES) (CAS 7664-93-9)

Australia Medicines & Poisons Schedule 7
MERCURY, EXCEPT WHEN SEPARATELY SPECIFIED IN THIS SCHEDULE (CAS 54-64-8)

Australia National Pollutant Inventory (NPI): Threshold quantity

Ethanol (Peroxidase substrate) (CAS 64-17-5) 10 TONNES/YR Threshold Category: 1
Sulfuric acid (Stop solution) (CAS 7664-93-9) 10 TONNES/YR Threshold Category: 1
Thimerosal (CAS 54-64-8) 5 kg Threshold Category: 1B

High Volume Industrial Chemicals (HVIC)

Ethanol (Peroxidase substrate) (CAS 64-17-5) 10000 - 99999 TONNES See the regulation for additional information.
Isopropanol (Peroxidase substrate) (CAS 67-63-0) 1000 - 9999 TONNES See the regulation for additional information.
Sulfuric acid (Stop solution) (CAS 7664-93-9) > 1000000 TONNES See the regulation for additional information.

Importation of Ozone Deleting Substances (Customs(Prohibited imports) Regulations 1956, Schedule 10)

Not listed.

National Pollutant Inventory (NPI) substance reporting list

Thimerosal (CAS 54-64-8) 2000 TONNES/YR Threshold Category: 2B

Prohibited Carcinogenic Substances

Not regulated.

Prohibited Substances (National Model Regulation for the control of Workplace Hazardous Substances, Schedule 2 NOHSC:1005 (1994) as amended)

Not listed.

Restricted Importation of Organochlorine Chemicals (Customs(Prohibited Imports) Regulations 1956, Schedule 9)

Not listed.

Restricted Carcinogenic Substances

Not regulated.

International regulations

Stockholm Convention
Not applicable.

Rotterdam Convention
Thimerosal (CAS 54-64-8) Pesticide

Kyoto protocol
Not applicable.

Montreal Protocol
Not applicable.

Basel Convention
Not applicable.

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Country(s) or region</td>
<td>Inventory name</td>
<td>On inventory (yes/no)*</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>No</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>No</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>No</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

**Issue date**
21-December-2016

**Disclaimer**
Zoetis Inc. believes that the information contained in this Safety Data Sheet is accurate, and while it is provided in good faith, it is without warranty of any kind, expressed or implied. If data for a hazard are not included in this document there is no known information at this time. The information in the sheet was written based on the best knowledge and experience currently available.