Safety Data Sheet
according to WHS Regulations

1 Identification

- Product identifier
  - Trade name: Abamectin Standard (1X1mL)
  - Part number: PST-1870M1000
  - Relevant identified uses of the substance or mixture and uses advised against
    Reagents and Standards for Analytical Chemical Laboratory Use

- Details of the supplier of the safety data sheet
  - Manufacturer/Supplier:
    Agilent Technologies Australia Pty Ltd
    679 Springvale Road
    Mulgrave
    Victoria 3170, Australia

- Further information obtainable from:
  - Telephone: 1800 802 402
  - e-mail: pdl-msds_author@agilent.com
  - Emergency telephone number: CHEMTREC®: +(61) - 290372994

2 Hazard(s) Identification

- Classification of the substance or mixture
  - flam
    Flam. Liq. 2  H225  Highly flammable liquid and vapour.
  - skull and crossbones
    Acute Tox. 3  H331  Toxic if inhaled.
  - health hazard
    STOT SE 1  H370  Causes damage to organs.
  - Acute Tox. 4  H302  Harmful if swallowed.

- Label elements
  - GHS label elements The product is classified and labelled according to the Globally Harmonised System (GHS).
  - Hazard pictograms
    - GHS02
    - GHS06
    - GHS08

- Signal word Danger

(Contd. on page 2)
Trade name: Abamectin Standard (1X1 mL)

- **Hazard-determining components of labelling:**
  - methanol
  - abamectin (combination of avermectin B1a and avermectin B1b) (ISO)

- **Hazard statements**
  - Highly flammable liquid and vapour.
  - Harmful if swallowed.
  - Toxic if inhaled.
  - Causes damage to organs.

- **Precautionary statements**
  - If medical advice is needed, have product container or label at hand.
  - Keep out of reach of children.
  - Read label before use.
  - Keep away from heat/sparks/open flames/hot surfaces. No smoking.
  - Ground/bond container and receiving equipment.
  - Use explosion-proof electrical/ventilating/lighting equipment.
  - Use only non-sparking tools.
  - Take precautionary measures against static discharge.
  - Do not breathe dust/fume/gas/mist/vapours/spray.
  - Wash thoroughly after handling.
  - Do not eat, drink or smoke when using this product.
  - Use only outdoors or in a well-ventilated area.
  - Wear protective gloves/protective clothing/eye protection/face protection.
  - IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
  - Rinse mouth.
  - 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 exposed: Call a POISON CENTER or doctor/physician.
  - Specific treatment (see on this label).
  - In case of fire: Use for extinction: CO2, powder or water spray.
  - Store in a well-ventilated place. Keep container tightly closed.
  - Store in a well-ventilated place. Keep cool.
  - Store locked up.
  - Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Other hazards**
- **Results of PBT and vPvB assessment**
  - **PBT:** Not applicable.
  - **vPvB:** Not applicable.

### 3 Composition and Information on Ingredients

- **Chemical characterisation:** Mixtures
- **Description:** Mixture of substances listed below with nonhazardous additions.

#### Dangerous components:

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-56-1</td>
<td>methanol</td>
<td>99.874%</td>
</tr>
<tr>
<td>71751-41-2</td>
<td>abamectin (combination of avermectin B1a and avermectin B1b) (ISO)</td>
<td>0.126%</td>
</tr>
</tbody>
</table>

(Contd. on page 3)
4 First Aid Measures

- Description of first aid measures
- General information:
  Immediately remove any clothing soiled by the product.
  Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
  Remove breathing equipment only after contaminated clothing have been completely removed.
  In case of irregular breathing or respiratory arrest provide artificial respiration.
- After inhalation:
  Supply fresh air or oxygen; call for doctor.
  In case of unconsciousness place patient stably in side position for transportation.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- After swallowing: Call for a doctor immediately.

Information for doctor:

- Most important symptoms and effects, both acute and delayed
  No further relevant information available.
- Indication of any immediate medical attention and special treatment needed
  No further relevant information available.

5 Fire Fighting Measures

- Extinguishing media
- Suitable extinguishing agents:
  CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- For safety reasons unsuitable extinguishing agents: Water with full jet
- Special hazards arising from the substance or mixture
  During heating or in case of fire poisonous gases are produced.
- Advice for firefighters
- Protective equipment: Mouth respiratory protective device.

6 Accidental Release Measures

- Personal precautions, protective equipment and emergency procedures
  Mount respiratory protective device.
  Wear protective equipment. Keep unprotected persons away.
- Environmental precautions:
  Do not allow product to reach sewage system or any water course.
  Inform respective authorities in case of seepage into water course or sewage system.
  Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  Dispose contaminated material as waste according to item 13.
  Ensure adequate ventilation.
- Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
7 Handling and Storage

· Handling:
· Precautions for safe handling
  Ensure good ventilation/exhaustion at the workplace.
  Open and handle receptacle with care.
  Prevent formation of aerosols.
· Information about fire - and explosion protection:
  Keep ignition sources away - Do not smoke.
  Protect against electrostatic charges.
  Keep respiratory protective device available.
· Conditions for safe storage, including any incompatibilities
· Storage:
· Requirements to be met by storerooms and receptacles: Store in a cool location.
· Information about storage in one common storage facility: Not required.
· Further information about storage conditions:
  Keep container tightly sealed.
  Store in cool, dry conditions in well sealed receptacles.
· Specific end use(s) No further relevant information available.

8 Exposure controls and personal protection

· Additional information about design of technical facilities: No further data; see item 7.
· Control parameters
  · Ingredients with limit values that require monitoring at the workplace:
    67-56-1 methanol
    NES  Short-term value: 328 mg/m³, 250 ppm
    Long-term value: 262 mg/m³, 200 ppm
    Sk
    WES Short-term value: 328 mg/m³, 250 ppm
    Long-term value: 262 mg/m³, 200 ppm
    Sk
· Additional information: The lists valid during the making were used as basis.
· Exposure controls
· Personal protective equipment:
· General protective and hygienic measures:
  Keep away from foodstuffs, beverages and feed.
  Immediately remove all soiled and contaminated clothing
  Wash hands before breaks and at the end of work.
  Store protective clothing separately.
· Respiratory protection:
  When used as intended with Agilent instruments the use of the product under normal laboratory conditions and
  with standard practices does not result in significant airborne exposures and therefore respiratory protection is not
  needed.
  Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved
  device equipment with appropriate organic or acid gas cartridge.
Trade name: Abamectin Standard (1X1 mL)

- **Protection of hands:**
  Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.
- **Material of gloves**
  For normal use: nitrile rubber, 11-13 mil thickness
  For direct contact with the chemical: butyl rubber, 12-15 mil thickness
- **Penetration time of glove material**
  For normal use: nitrile rubber: 1 hour
  For direct contact with the chemical: butyl rubber: > 4 hours
- **Eye protection:**
  Tightly sealed goggles

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### 9 Physical and Chemical Properties

- **Information on basic physical and chemical properties**
  - **General Information**
    - **Appearance:**
      - **Form:** Fluid
      - **Colour:** Colourless
      - **Odour:** Alcohol-like
      - **Odour threshold:** Not determined.
    - **pH-value:** Not determined.
  - **Change in condition**
    - **Melting point/freezing point:** -98 °C
    - **Initial boiling point and boiling range:** 64.7 °C
  - **Flash point:** 9 °C
  - **Flammability (solid, gas):** Not applicable.
  - **Ignition temperature:** 455 °C
  - **Decomposition temperature:** Not determined.
  - **Auto-ignition temperature:** Product is not selfigniting.
  - **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
  - **Explosion limits:**
    - **Lower:** 5.5 Vol %
    - **Upper:** 44 Vol %
  - **Vapour pressure at 20 °C:** 100 hPa
  - **Density at 20 °C:** 0.80046 g/cm³
  - **Relative density**
    - Not determined.
  - **Vapour density**
    - Not determined.
Evaporation rate
Not determined.

Solubility in / Miscibility with water:
Not miscible or difficult to mix.

Partition coefficient: n-octanol/water:
Not determined.

Viscosity:
Dynamic: Not determined.
Kinematic: Not determined.

Solvent content:
Organic solvents: 99.9 %
VOC (EC) 99.87 %

Solids content: 0.1 %

Other information
No further relevant information available.

10 Stability and Reactivity

Reactivity
No further relevant information available.

Chemical stability
Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
Possibility of hazardous reactions No dangerous reactions known.
Conditions to avoid No further relevant information available.
Incompatible materials: No further relevant information available.
Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological Information

Information on toxicological effects

Acute toxicity

LD/LC50 values relevant for classification:

ATE (Acute Toxicity Estimates)

<table>
<thead>
<tr>
<th>Oral</th>
<th>LD50</th>
<th>1,187 mg/kg (rat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalative</td>
<td>LC50/4 h</td>
<td>3 mg/L</td>
</tr>
</tbody>
</table>

67-56-1 methanol

<table>
<thead>
<tr>
<th>Oral</th>
<th>LD50</th>
<th>5,628 mg/kg (rat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dermal</td>
<td>LD50</td>
<td>15,800 mg/kg (rabbit)</td>
</tr>
</tbody>
</table>

71751-41-2 abamectin (combination of avermectin B1a and avermectin B1b) (ISO)

<table>
<thead>
<tr>
<th>Oral</th>
<th>LD50</th>
<th>1.5 mg/kg (rat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dermal</td>
<td>LD50</td>
<td>&gt;2,000 mg/kg (rabbit)</td>
</tr>
<tr>
<td>Inhalative</td>
<td>LC50/4 h</td>
<td>1,100 mg/L (rat)</td>
</tr>
</tbody>
</table>

Primary irritant effect:
Skin corrosion/irritation No irritant effect.
Serious eye damage/irritation No irritating effect.
Respiratory or skin sensitisation No sensitising effects known.
48.1.26 · Additional toxicological information:
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Toxic
Harmful

12 Ecological Information

· Toxicity
  · Aquatic toxicity: No further relevant information available.
  · Persistence and degradability: No further relevant information available.
  · Behaviour in environmental systems:
    · Bioaccumulative potential: No further relevant information available.
    · Mobility in soil: No further relevant information available.
  · Additional ecological information:
  · General notes:
    Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water
    Do not allow product to reach ground water, water course or sewage system, even in small quantities.
    Danger to drinking water if even extremely small quantities leak into the ground.
  · Results of PBT and vPvB assessment
    · PBT: Not applicable.
    · vPvB: Not applicable.
  · Other adverse effects: No further relevant information available.

13 Disposal considerations

· Waste treatment methods
· Recommendation
  Must not be disposed together with household garbage. Do not allow product to reach sewage system.
· Uncleaned packaging:
  · Recommendation: Disposal must be made according to official regulations.

14 Transport information

· Not Regulated, De minimus Quantities

· UN-Number
  · ADG, IMDG, IATA: UN1230

· UN proper shipping name
  · ADG: 1230 METHANOL solution, ENVIRONMENTALLY HAZARDOUS
  · IMDG: METHANOL solution, MARINE POLLUTANT
  · IATA: METHANOL solution
### Transport hazard class(es)

<table>
<thead>
<tr>
<th>Class</th>
<th>Label</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADG</td>
<td></td>
<td>3 Flammable liquids.</td>
</tr>
<tr>
<td>IMDG</td>
<td></td>
<td>3 Flammable liquids.</td>
</tr>
<tr>
<td>IATA</td>
<td></td>
<td>3 Flammable liquids.</td>
</tr>
</tbody>
</table>

### Environmental hazards:

- **Product contains environmentally hazardous substances:** abamectin (combination of avermectin B1a and avermectin B1b) (ISO)
- **Marine pollutant:**
- **Special marking (ADG):** Symbol (fish and tree)

### Special precautions for user

- **Warning:** Flammable liquids.
- **Danger code (Kemler):** 336
- **EMS Number:** F-E,S-D
- **Stowage Category:** B
- **Stowage Code:** SW2 Clear of living quarters.

### Transport in bulk according to Annex II of Marpol and the IBC Code

- **Not applicable.**

### Transport/Additional information:

<table>
<thead>
<tr>
<th>Class</th>
<th>Label</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADG</td>
<td></td>
<td>1L</td>
</tr>
<tr>
<td>IMDG</td>
<td></td>
<td>Code: E2</td>
</tr>
<tr>
<td>IATA</td>
<td></td>
<td>Maximum net quantity per inner packaging: 30 ml</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Maximum net quantity per outer packaging: 500 ml</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>D/E</td>
</tr>
</tbody>
</table>
Trade name: Abamectin Standard (1X1 mL)

- IMDG
  - Limited quantities (LQ): 1L Code: E2
    Maximum net quantity per inner packaging: 30 ml
    Maximum net quantity per outer packaging: 500 ml
  - Excepted quantities (EQ)

- UN "Model Regulation": UN 1230 METHANOL SOLUTION, 3 (6.1), II,
  ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Australian Inventory of Chemical Substances
    67-56-1 methanol
  - Standard for the Uniform Scheduling of Medicines and Poisons
    67-56-1 methanol
    71751-41-2 abamectin (combination of avermectin B1a and avermectin B1b) (ISO)
  - Directive 2012/18/EU
  - Named dangerous substances - ANNEX I None of the ingredients is listed.
  - Seveso category
    H2 ACUTE TOXIC
    E1 Hazardous to the Aquatic Environment
    P5c FLAMMABLE LIQUIDS
  - Qualifying quantity (tonnes) for the application of lower-tier requirements 50 t
  - Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t
  - Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent’s state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

- Relevant phrases
  H225 Highly flammable liquid and vapour.
  H300 Fatal if swallowed.
  H301 Toxic if swallowed.
  H311 Toxic in contact with skin.
  H330 Fatal if inhaled.
  H331 Toxic if inhaled.
  H361 Suspected of damaging fertility or the unborn child.
  H370 Causes damage to organs.
  H372 Causes damage to organs through prolonged or repeated exposure.

- Abbreviations and acronyms:
  ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  IMDG: International Maritime Code for Dangerous Goods
  IATA: International Air Transport Association
  EINECS: European Inventory of Existing Commercial Chemical Substances
  ELINCS: European List of Notified Chemical Substances
  CAS: Chemical Abstracts Service (division of the American Chemical Society)

(Contd. on page 10)
Trade name: Abamectin Standard (1X1 mL)

VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 2: Acute toxicity – Category 2
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 1: Acute toxicity – Category 1
Repr. 2: Reproductive toxicity – Category 2
STOT SE 1: Specific target organ toxicity (single exposure) – Category 1
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1