SECTION 1 - IDENTIFICATION OF THE MATERIAL AND SUPPLIER

| Novartis Animal Health Australasia Pty Ltd. | ABN 64 076 745 198 | Telephone 02 9805 3555 (office hours) |
| North Ryde, NSW 2113 | | Fax 02 9888 8387 |

Chemical nature: Dicyclanil and Diflubenzuron in a suitable solvent system.
Trade Name: CLiK Plus® off-shears Blowfly and Lice Treatment Spray-on
Product Use: Animal insecticide for use as described on the product label.
Creation Date: August, 2013
This version issued: August, 2013 and is valid for 5 years from this date.

SECTION 2 - HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE
This product is classified as: Xn, Harmful. N, Dangerous to the environment. Not classified as hazardous according to the criteria of SWA.

Not a Dangerous Good according to the Australian Dangerous Goods (ADG) Code. However, this is a C1 Combustible Liquid so must be stored and handled as specified in AS 1940 "The storage and handling of flammable and combustible liquids."

Risk Phrases: R52. Harmful to aquatic organisms.
Safety Phrases: S23, S36, S61, S24/25. Do not breathe vapours or mists. Wear suitable protective clothing. Avoid release to the environment. Refer to special instructions/Safety Data Sheets. Avoid contact with skin and eyes.

SUSMP Classification: S5
ADG Classification: None allocated. Not a Dangerous Good under the ADG Code.
UN Number: None allocated

GHS Signal word: WARNING
HAZARD STATEMENT:
H227: Combustible liquid.
H402: Harmful to aquatic life.

PREVENTION
P210: Keep away from heat, sparks, open flames and hot surfaces. - No smoking.
P280: Wear protective gloves, protective clothing and eye or face protection.

RESPONSE
P352: Wash with plenty of soap and water.
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353: IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water.
P332+P313: If skin irritation occurs: Get medical advice.
P337+P313: If eye irritation persists: Get medical advice.
P391: Collect spillage.
P370+P378: In case of fire, use carbon dioxide, dry chemical, foam, water fog.

STORAGE
P402+P404: Store in a dry place. Store in a closed container.
P403+P235: Store in a well-ventilated place. Keep cool.

DISPOSAL
P501: Dispose of contents and containers as specified on the registered label.

Emergency Overview
Description & Colour: Blue liquid emulsion.
Odour: No data.
Major Health Hazards: no significant risk factors have been found for this product.
SAFETY DATA SHEET
Issued by: Novartis Animal Health Australasia Pty Ltd.
Phone: 02 9805 3555 (office hours)
Poisons Information Centre: 13 1126 from anywhere in Australia, (0800 764 766 in New Zealand)

Potential Health Effects

INHALATION:
Short Term Exposure: Available data indicates that this product is not harmful. However product may be mildly irritating, although unlikely to cause anything more than mild transient discomfort.
Long Term Exposure: No data for health effects associated with long term inhalation.

SKIN CONTACT:
Short Term Exposure: Available data indicates that this product is not harmful. It should present no hazards in normal use. However product may be irritating, but is unlikely to cause anything more than mild transient discomfort.
Long Term Exposure: No data for health effects associated with long term skin exposure.

EYE CONTACT:
Short Term Exposure: This product may be irritating to eyes, but is unlikely to cause anything more than mild transient discomfort.
Long Term Exposure: No data for health effects associated with long term eye exposure.

INGESTION:
Short Term Exposure: Significant oral exposure is considered to be unlikely. However, this product may be irritating to mucous membranes but is unlikely to cause anything more than transient discomfort.
Long Term Exposure: No data for health effects associated with long term ingestion.

CARCINOGEN STATUS:
SWA: No significant ingredient is classified as carcinogenic by SWA.
NTP: No significant ingredient is classified as carcinogenic by NTP.
IARC: No significant ingredient is classified as carcinogenic by IARC.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS No</th>
<th>Conc,%</th>
<th>TWA (mg/m³)</th>
<th>STEL (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dicyclanil</td>
<td>112636-83-6</td>
<td>50g/L</td>
<td>not set</td>
<td>not set</td>
</tr>
<tr>
<td>Diflubenzuron</td>
<td>35367-38-5</td>
<td>15g/L</td>
<td>not set</td>
<td>not set</td>
</tr>
<tr>
<td>Other non hazardous ingredients</td>
<td>secret to 100</td>
<td>not set</td>
<td>not set</td>
<td></td>
</tr>
</tbody>
</table>

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non hazardous ingredients are also possible.

The SWA TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. The STEL (Short Term Exposure Limit) is an exposure value that may be equalled (but should not be exceeded) for no longer than 15 minutes and should not be repeated more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak" is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

SECTION 4 - FIRST AID MEASURES

GENERAL INFORMATION:
You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 13 1126 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this SDS with you when you call.

Inhalation: No first aid measures normally required. However, if inhalation has occurred, and irritation has developed, remove to fresh air and observe until recovered. If irritation becomes painful or persists more than about 30 minutes, seek medical advice.

Skin Contact: Wash gently and thoroughly with water (use non-abrasive soap if necessary) for 5 minutes or until chemical is removed.

Eye Contact: No effects expected. If irritation does occur, flush contaminated eye(s) with lukewarm, gently flowing water for 5 minutes or until the product is removed. Obtain medical advice if irritation becomes painful or lasts more than a few minutes. Take special care if exposed person is wearing contact lenses.

Ingestion: If product is swallowed or gets in mouth, do NOT induce vomiting; wash mouth with water and give some water to drink. If symptoms develop, or if in doubt contact a Poisons Information Centre or a doctor.

SECTION 5 - FIRE FIGHTING MEASURES

Fire and Explosion Hazards: The major hazard in fires is usually inhalation of heated and toxic or oxygen deficient (or both), fire gases. This product is classified as a C1 combustible product. There is

Product Name: CLiK Plus® off-shears Blowfly and Lice Treatment Spray-on
Page: 2 of 6
This revision issued: August, 2013
no risk of an explosion from this product under normal circumstances if it is involved in a fire. Violent steam generation or eruption may occur upon application of direct water stream on hot liquids. Fire decomposition products from this product may be toxic if inhaled. Take appropriate protective measures.

**Extinguishing Media:**
In case of fire, use carbon dioxide, dry chemical, foam, water fog.

**Fire Fighting:**
If a significant quantity of this product is involved in a fire, call the fire brigade.

**Flash point:**
>61°C, Closed cup

**Upper Flammability Limit:**
No data.

**Lower Flammability Limit:**
No data.

**Autoignition temperature:**
No data.

**Flammability Class:**
C1

### SECTION 6 - ACCIDENTAL RELEASE MEASURES

**Accidental release:**
In the event of a major spill, prevent spillage from entering drains or water courses. As a minimum, wear overalls, goggles and gloves. Suitable materials for protective clothing include rubber. Eye/face protective equipment should comprise as a minimum, protective glasses and, preferably, goggles. If there is a significant chance that vapours or mists are likely to build up in the cleanup area, we recommend that you use a respirator. Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned below (section 8). Otherwise, not normally necessary.

Stop leak if safe to do so, and contain spill. Absorb onto sand, vermiculite or other suitable absorbent material. If spill is too large or if absorbent material is not available, try to create a dike to stop material spreading or going into drains or waterways. Sweep up and shovel or collect recoverable product into labelled containers for recycling or salvage, and dispose of promptly. Recycle containers wherever possible after careful cleaning. Refer to product label for specific instructions. After spills, wash area preventing runoff from entering drains. If a significant quantity of material enters drains, advise emergency services. Full details regarding disposal of used containers, spillage and unused material may be found on the label. If there is any conflict between this SDS and the label, instructions on the label prevail. Ensure legality of disposal by consulting regulations prior to disposal. Thoroughly launder protective clothing before storage or re-use. Advise laundry of nature of contamination when sending contaminated clothing to laundry.

### SECTION 7 - HANDLING AND STORAGE

**Handling:**
Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Check Section 8 of this SDS for details of personal protective measures, and make sure that those measures are followed. The measures detailed below under "Storage" should be followed during handling in order to minimise risks to persons using the product in the workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.

**Storage:**
Note that this product is combustible and therefore, for Storage, meets the definition of Dangerous Goods in some states. If you store large quantities (tonnes) of such products, we suggest that you consult your state's Dangerous Goods authority in order to clarify your obligations regarding their storage.

Protect this product from light. Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight. Make sure that the product does not come into contact with substances listed under "Incompatibilities" in Section 10. Some liquid preparations settle or separate on standing and may require stirring before use. Check packaging - there may be further storage instructions on the label.

### SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

The following Australian Standards will provide general advice regarding safety clothing and equipment:


- **SWA Exposure Limits**
  - TWA (mg/m³)
  - STEL (mg/m³)

Exposure limits have not been established by SWA for any of the significant ingredients in this product.
The ADI for Dicyclanil is set at 0.002mg/kg/day. The corresponding NOEL is set at 0.2mg/kg/day. ADI means Acceptable Daily Intake; NOEL means No-observable-effect-level. Data from Australian ADI List, Dec 2012.

No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems.

**Ventilation:**
This product should only be used in a well ventilated area. If natural ventilation is inadequate, use of a fan is suggested.

**Eye Protection:**
Eye protection such as protective glasses or goggles is recommended when this product is being used.

**Skin Protection:**
You should avoid contact even with mild skin irritants. Therefore you should wear suitable impervious elbow-length gloves and facial protection when handling this product. See below for suitable material types.

**Protective Material Types:**
We suggest that protective clothing be made from the following materials: rubber.

**Respirator:**
Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned above. Otherwise, not normally necessary.

Safety deluge showers should, if practical, be provided near to where this product is being handled commercially.

### SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES:

- **Description & colour:** Blue liquid emulsion.
- **Odour:** No data.
- **Boiling Point:** Not available.
- **Freezing/Melting Point:** No specific data. Liquid at normal temperatures.
- **Vapour Pressure:** No data.
- **Vapour Density:** No data.
- **Specific Gravity:** 1.02-1.04
- **Water Solubility:** Not available.
- **pH:** 4.5-7.5
- **Volatility:** No data.
- **Odour Threshold:** No data.
- **Evaporation Rate:** No data.
- **Coeff Oil/water Distribution:** No data
- **Viscosity:** Max. 500 mPas at 60rpm (temperature not stated)
- **Autoignition temp:** No data.

### SECTION 10 - STABILITY AND REACTIVITY

**Reactivity:**
This product is unlikely to react or decompose under normal storage conditions. However, if you have any doubts, contact the supplier for advice on shelf life properties.

**Conditions to Avoid:**
Protect this product from light. Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight.

**Incompatibilities:**
No particular Incompatibilities.

**Fire Decomposition:**
Combustion forms carbon dioxide, and if incomplete, carbon monoxide and possibly smoke. Water is also formed. May form nitrogen and its compounds, and under some circumstances, oxides of nitrogen. Occasionally hydrogen cyanide gas in reducing atmospheres. May form hydrogen fluoride gas and other compounds of fluorine. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.

**Polymerisation:**
This product will not undergo polymerisation reactions.

### SECTION 11 - TOXICOLOGICAL INFORMATION

**LOCAL EFFECTS:**
**Target Organs:** There is no data to hand indicating any particular target organs.
 Classification of Hazardous Ingredients

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Risk Phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>No ingredient mentioned in the HSIS Database is present in this product at hazardous concentrations.</td>
<td></td>
</tr>
<tr>
<td><strong>Dicyclanil:</strong> LD$_{50}$ Oral, Rat 520mg/kg</td>
<td>LC$_{50}$ Inhalation, Rat = 3.18mg/L/4hr</td>
</tr>
<tr>
<td><strong>Diflubenzuron:</strong> LD$_{50}$ Dermal, Rat = &gt;10,000mg/kg</td>
<td>LC$_{50}$ Inhalation, Rat = 35mg/L/4hr</td>
</tr>
</tbody>
</table>

SECTION 12 - ECOLOGICAL INFORMATION

This product is harmful to aquatic organisms.

The active ingredients, Dicyclanil and Diflubenzuron, being insect growth regulators, will adversely affect aquatic species whose larval stages involve chitin, e.g. crustacean. Product is slightly toxic to fish based on known ecotoxicity of the active ingredients.

**Ecological data for Dicyclanil technical**

<table>
<thead>
<tr>
<th>Species</th>
<th>LC$_{50}$</th>
<th>EC$_{50}$</th>
<th>EBC$_{50}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crustacea [48hrs]</td>
<td>-</td>
<td>8.3 mg/L</td>
<td>-</td>
</tr>
<tr>
<td>Bluegill [96 hrs]</td>
<td>&gt;100 mg/L</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Trout [96 hrs]</td>
<td>60 mg/L</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Water flea (Daphnia magna) [48hrs]</td>
<td>1.1 mg/L</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Green algae (Scenedemus subspicatus) [72hrs]</td>
<td>-</td>
<td>-</td>
<td>24 mg/L</td>
</tr>
<tr>
<td>Earthworm (Eisenia foetida) [14 days]</td>
<td>1000mg/kg</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Mallard Duck</td>
<td>500-1620 mg/kg</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Ecological data for Diflubenzuron technical**

<table>
<thead>
<tr>
<th>Species</th>
<th>LC$_{50}$ (96hrs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult grass shrimp</td>
<td>7 mg/L</td>
</tr>
<tr>
<td>Larvae grass shrimp</td>
<td>1.44 $\mu$g/L</td>
</tr>
<tr>
<td>Mysid Shrimp</td>
<td>2.1 $\mu$g/L</td>
</tr>
<tr>
<td>Rainbow Trout</td>
<td>135-660 mg/L</td>
</tr>
<tr>
<td>Fathead minnow</td>
<td>135-660 mg/L</td>
</tr>
<tr>
<td>Bluegill Sunfish</td>
<td>135-660 mg/L</td>
</tr>
<tr>
<td>Channel catfish</td>
<td>135-660 mg/L</td>
</tr>
</tbody>
</table>

SECTION 13 - DISPOSAL CONSIDERATIONS

**Disposal:** Special help is available for the disposal of Agricultural Chemicals. The product label will give general advice regarding disposal of small quantities, and how to cleanse containers. However, for help with the collection of unwanted rural chemicals, contact ChemClear 1800 008 182 http://www.chemclear.com.au/ and for help with the disposal of empty drums, contact DrumMuster http://www.drummuster.com.au/ where you will find contact details for your area.

SECTION 14 - TRANSPORT INFORMATION

**ADG Code:** This product is not classified as a Dangerous Good. No special transport conditions are necessary unless required by other regulations.

SECTION 15 - REGULATORY INFORMATION

**AICS:** All of the significant ingredients in this formulation are compliant with NICNAS regulations.

The following ingredients: Dicyclanil, Diflubenzuron, are mentioned in the SUSMP.

SECTION 16 - OTHER INFORMATION

This SDS contains only safety-related information. For other data see product literature.

**Acronyms:**

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADG Code</td>
<td>Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition)</td>
</tr>
<tr>
<td>AICS</td>
<td>Australian Inventory of Chemical Substances</td>
</tr>
<tr>
<td>SWA</td>
<td>Safe Work Australia, formerly ASCC and NOHSC</td>
</tr>
<tr>
<td>CAS number</td>
<td>Chemical Abstracts Service Registry Number</td>
</tr>
<tr>
<td>Hazchem Code</td>
<td>Emergency action code of numbers and letters that provide information to emergency services especially firefighters</td>
</tr>
<tr>
<td>IARC</td>
<td>International Agency for Research on Cancer</td>
</tr>
<tr>
<td>NOS</td>
<td>Not otherwise specified</td>
</tr>
</tbody>
</table>

SAFETY DATA SHEET

Issued by: Novartis Animal Health Australasia Pty Ltd. Phone: 02 9805 3555 (office hours)

Poisons Information Centre: 13 1126 from anywhere in Australia, (0800 764 766 in New Zealand)
Please read all labels carefully before using product.

This SDS is prepared in accord with the SWA document “Preparation of Safety Data Sheets for Hazardous Chemicals - Code of Practice” (December 2011)
Copyright © Kilford & Kilford Pty Ltd, August, 2013.
http://www.kilford.com.au/ Phone (02)9251 4532