SECTION 1: IDENTIFICATION

1.1. Product Identifier
Product Form: Mixture
Product Name: Noromectin Pour On
Product Code: ANADA 200-272

1.2. Intended Use of the Product
Use of the substance/mixture: Noromectin Pour On for cattle is an ivermectin-based endectocide for the effective treatment and control of a wide range of internal and external parasites of beef and non-lactating dairy cattle.

1.3. Name, Address, and Telephone of the Responsible Party
Supplier
Norbrook, Inc.
9401 Indian Creek Parkway – Ste. 680
Overland Park, KS 66210
Phone: 913 599 5777
Fax: 913 599 5766

Manufacturer
Norbrook Laboratories Ltd,
Station Works, Newry, Co.Down,
N.Ireland, BT35 6JP.
Telephone No. +44 (0)28 3026 4435
Fax No. +44 (0)28 3026 1721
E-Mail: enquiries@norbrook.co.uk

1.4. Emergency Telephone Number
Emergency Number: 913 599 5777

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture
GHS-US classification
Flam. Liq. 2 H225
Acute Tox. 4 (Oral) H302
Eye Irrit. 2A H319
Repr. 2 H361
STOT SE 3 H336
Aquatic Acute 3 H402
Aquatic Chronic 3 H412

Full text of hazard classes and H-statements: see section 16

2.2. Label Elements
GHS-US Labeling
Hazard Pictograms (GHS-US):

Signal Word (GHS-US): Danger
Hazard Statements (GHS-US):
H225 - Highly flammable liquid and vapor.
H302 - Harmful if swallowed.
H319 - Causes serious eye irritation.
H336 - May cause drowsiness or dizziness.
H361 - Suspected of damaging fertility or the unborn child.
H402 - Harmful to aquatic life.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary Statements (GHS-US):
P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from extremely high or low temperatures, ignition sources, and incompatible materials. - No smoking.
P233 - Keep container tightly closed.
P240 - Ground/bond container and receiving equipment.
P241 - Use explosion-proof electrical, ventilating, and lighting equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P261 - Avoid breathing vapors, mist, or spray.
P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
Noromectin Pour On
Safety Data Sheet
According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, protective clothing, and eye protection.
P301+P330+P312 - If swallowed: Rinse mouth. Call a poison center or doctor if you feel unwell.
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 - If inhaled: Remove person to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P337+P312 - If inhaled: Remove person to fresh air and keep at rest in a position comfortable for breathing.
P370+P378 - In case of fire: Use appropriate media (see section 5) to extinguish.
P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

2.3. Other Hazards
Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

2.4. Unknown Acute Toxicity (GHS-US)
No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance
Not applicable

3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product Identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl alcohol</td>
<td>(CAS No) 67-63-0</td>
<td>Proprietary</td>
<td>Flam. Liq. 2, H225, Eye Irrit. 2A, H319, STOT SE 3, H336</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acute Tox. 2 (Oral), H300, Acute Tox. 3 (Dermal), H311</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Repr. 2, H361, STOT SE 1, H370</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>STOT RE 1, H372, Aquatic Acute 1, H400</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aquatic Chronic 1, H410</td>
</tr>
<tr>
<td>Ivermectin</td>
<td>(CAS No) 70288-86-7</td>
<td>Proprietary</td>
<td>Not classified</td>
</tr>
<tr>
<td>Triethanolamine</td>
<td>(CAS No) 102-71-6</td>
<td>Proprietary</td>
<td></td>
</tr>
</tbody>
</table>

The specific chemical identity and/or exact percentage of composition have been withheld as a trade secret [29 CFR 1910.1200] Full text of H-phrases; see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures
First-aid Measures General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).
First-aid Measures After Inhalation: Remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.
First-aid Measures After Skin Contact: Remove contaminated clothing. Gently wash with plenty of soap and water followed by rinsing with water for at least 15 minutes. Call a POISON CENTER or doctor/physician if you feel unwell. Wash contaminated clothing before reuse.
First-aid Measures After Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. Obtain medical attention if irritation persists.
First-aid Measures After Ingestion: Do NOT induce vomiting. Rinse mouth. Immediately call a POISON CENTER or doctor/physician.
4.2. Most important symptoms and effects, both acute and delayed

**Symptoms/Injuries:** May cause drowsiness or dizziness. Causes serious eye irritation. Harmful if swallowed. Suspected of damaging fertility or the unborn child. Please refer to the package insert for more detailed information.

**Symptoms/Injuries After Inhalation:** May cause drowsiness or dizziness.

**Symptoms/Injuries After Skin Contact:** May cause skin irritation.

**Symptoms/Injuries After Eye Contact:** Causes serious eye irritation. Symptoms may include: Redness, pain, swelling, itching, burning, tearing, and blurred vision.

**Symptoms/Injuries After Ingestion:** Harmful if swallowed. Symptoms may include: Gastrointestinal irritation. Abdominal pain. Diarrhea. Nausea. Vomiting.

**Chronic Symptoms:** Suspected of damaging fertility or the unborn child.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

### SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

**Suitable Extinguishing Media:** Water spray, alcohol foam, dry chemical, carbon dioxide.

**Unsuitable Extinguishing Media:** Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture

**Fire Hazard:** Highly flammable liquid and vapor.

**Explosion Hazard:** May form flammable/explosive vapor-air mixture.

**Reactivity:** Reacts with (strong) oxidizers: (increased) risk of fire.

5.3. Advice for Firefighters

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire. Under fire conditions, hazardous fumes will be present.

**Firefighting Instructions:** Use water spray or fog for cooling exposed containers. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

**General Measures:** Avoid all contact with skin, eyes, or clothing. Avoid breathing vapor, mist, or spray. Use special care to avoid static electric charges. Keep away from open flames, hot surfaces and sources of ignition. Use only as directed.

6.1.1. For Non-emergency Personnel

**Protective Equipment:** Use appropriate personal protection equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel.

6.1.2. For Emergency Responders

**Protective Equipment:** Equip cleanup crew with proper protection.

**Emergency Procedures:** Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

6.2. Environmental Precautions

Avoid release to the environment.

6.3. Methods and Material for Containment and Cleaning Up

**For Containment:** Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

**Methods for Cleaning Up:** Clean up spills immediately and dispose of waste safely. Absorb and/or contain spill with inert material, then place in suitable container. Use only non-sparking tools. Do not take up in combustible material such as: saw dust or cellulotic material.

6.4. Reference to Other Sections

See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

### SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

**Additional Hazards When Processed:** Handle empty containers with care because residual vapors are flammable.

**Precautions for Safe Handling:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.
### 7.2. Conditions for Safe Storage, Including Any Incompatibilities

**Technical Measures:** Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof electrical, ventilating, and lighting equipment.

**Storage Conditions:** Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep in fireproof place. Store locked up.

**Incompatible Products:** Strong acids, strong bases, strong oxidizers.

**Storage Temperature:** 25 °C Max

### 7.3. Specific End Use(s)

Noromectin Pour On for cattle is an ivermectin-based endectocide for the effective treatment and control of a wide range of internal and external parasites of beef and non-lactating dairy cattle.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control Parameters

**Appropriate Engineering Controls:** Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below the applicable workplace exposure limits indicated above. All electrical equipment should comply with the National Electric Code. Gas detectors should be used when flammable gases or vapors may be released. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof equipment. Ensure all national/local regulations are observed.

**Personal Protective Equipment:** Avoid all unnecessary exposure. Gloves. Protective clothing. Protective goggles. Insufficient ventilation: wear respiratory protection.

**Materials for Protective Clothing:** Chemically resistant materials and fabrics.

**Hand Protection:** Wear chemically resistant protective gloves.

**Eye Protection:** Chemical safety goggles.

**Skin and Body Protection:** Wear fire/flame resistant/retardant clothing. Wash contaminated clothing before reuse.

**Respiratory Protection:** In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

### 8.2. Exposure Controls

**Appropriate Engineering Controls**

**Personal Protective Equipment**

**Materials for Protective Clothing**

**Hand Protection**

**Eye Protection**

**Skin and Body Protection**

**Respiratory Protection**

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on Basic Physical and Chemical Properties

**Physical State**

Liquid
Noromectin Pour On
Safety Data Sheet
According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

9.2. Other Information
No additional information available

SECTION 10: STABILITY AND REACTIVITY
10.1. Reactivity: Reacts with (strong) oxidizers: (increased) risk of fire.
10.2. Chemical Stability: Stable at standard temperature and pressure.
10.3. Possibility of Hazardous Reactions: Hazardous polymerization will not occur.
10.4. Conditions to Avoid: Direct sunlight. Extremely high or low temperatures. Sparks, heat, open flame and other sources of ignition.
10.5. Incompatible Materials: Strong acids, strong bases, strong oxidizers.

SECTION 11: TOXICOLOGICAL INFORMATION
11.1. Information On Toxicological Effects
Acute Toxicity: Oral: Harmful if swallowed.

<table>
<thead>
<tr>
<th>Noromectin Pour On</th>
<th>2,000.00 mg/kg body weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ivermectin (70288-86-7)</td>
<td>10 mg/kg</td>
</tr>
<tr>
<td>LD50 Oral Rat</td>
<td>10 mg/kg</td>
</tr>
<tr>
<td>ATE (Dermal)</td>
<td>300.00 mg/kg body weight</td>
</tr>
<tr>
<td>LD50 Oral Rat</td>
<td>6400 mg/kg</td>
</tr>
<tr>
<td>LD50 Dermal Rabbit</td>
<td>&gt; 2000 mg/kg</td>
</tr>
<tr>
<td>Triethanolamine (102-71-6)</td>
<td></td>
</tr>
<tr>
<td>Isopropyl alcohol (67-63-0)</td>
<td></td>
</tr>
<tr>
<td>LD50 Oral Rat</td>
<td>4710 mg/kg</td>
</tr>
<tr>
<td>LD50 Dermal Rabbit</td>
<td>4059 mg/kg</td>
</tr>
<tr>
<td>LC50 Inhalation Rat</td>
<td>72.6 mg/l/4h (Exposure time: 4 h)</td>
</tr>
<tr>
<td>LC50 Inhalation Rat</td>
<td>72.5 mg/l/4h</td>
</tr>
</tbody>
</table>

Skin Corrosion/Irritation: Not classified
Serious Eye Damage/Irritation: Causes serious eye irritation.
Respiratory or Skin Sensitization: Not classified
Germ Cell Mutagenicity: Not classified
Carcinogenicity: Not classified

Triethanolamine (102-71-6) | IARC group | 3
Isopropyl alcohol (67-63-0)
IARC group 3

Reproductive Toxicity: Suspected of damaging fertility or the unborn child.
Specific Target Organ Toxicity (Single Exposure): May cause drowsiness or dizziness.
Specific Target Organ Toxicity (Repeated Exposure): Not classified
Aspiration Hazard: Not classified
Symptoms/Injuries After Inhalation: May cause drowsiness or dizziness.
Symptoms/Injuries After Skin Contact: May cause skin irritation.
Symptoms/Injuries After Eye Contact: Causes serious eye irritation. Symptoms may include: Redness, pain, swelling, itching, burning, tearing, and blurred vision.
Chronic Symptoms: Suspected of damaging fertility or the unborn child.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity
Ecology - General: Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

Triethanolamine (102-71-6)
LC50 Fish 1 10600 (10600 - 13000) mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
LC 50 Fish 2 1000 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
ErC50 (algae) 169 mg/l

Isopropyl alcohol (67-63-0)
LC50 Fish 1 9640 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1 13299 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 Other Aquatic Organisms 1 1000 mg/l (Exposure time: 96 h - Species: Desmodesmus subspicatus)
LC 50 Fish 2 11130 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Other Aquatic Organisms 2 1000 mg/l (Exposure time: 72 h - Species: Desmodesmus subspicatus)

12.2. Persistence and Degradability
No additional information available

12.3. Bioaccumulative Potential

Triethanolamine (102-71-6)
BCF fish 1 3.9
Log Pow -2.53

Isopropyl alcohol (67-63-0)
Log Pow 0.05 (at 25 °C)

12.4. Mobility in Soil
No additional information available

12.5. Other Adverse Effects
Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods
Sewage Disposal Recommendations: This material is hazardous to the aquatic environment. Keep out of sewers and waterways.
Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, and international regulations.
Additional Information: Handle empty containers with care because residual vapors are flammable.

SECTION 14: TRANSPORT INFORMATION

14.1. In Accordance with DOT
Proper Shipping Name: ISOPROPANOL SOLUTION (ISOPROPYL ALCOHOL)
Hazard Class: 3
Identification Number: UN1219
Label Codes: 3
Packing Group: II
ERG Number: 129

14.2. In Accordance with IMDG
Proper Shipping Name: ISOPROPANOL SOLUTION (ISOPROPYL ALCOHOL)
Hazard Class: 3
Noromectin Pour On
Safety Data Sheet
According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

| Identification Number : UN1219          |
| Packing Group          : II               |
| Label Codes            : 3                |
| EmS-No. (Fire)         : F-E              |
| EmS-No. (Spillage)     : S-D              |

14.3. In Accordance with IATA

| Proper Shipping Name       : ISOPROPANOL SOLUTION(ISOPROPYL ALCOHOL) |
| Packing Group              : II                       |
| Identification Number      : UN1219                  |
| Hazard Class               : 3                       |
| Label Codes                : 3                       |
| ERG Code (IATA)            : 3L                      |

SECTION 15: REGULATORY INFORMATION

15.1 US Federal Regulations

| Noromectin Pour On          |
| SARA Section 311/312 Hazard Classes | Fire hazard       |
|                              | Immediate (acute) health hazard   |
|                              | Delayed (chronic) health hazard   |

Triethanolamine (102-71-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Isopropyl alcohol (67-63-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Subject to reporting requirements of United States SARA Section 313

| EPA TSCA Regulatory Flag   | T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA |
| SARA Section 313 - Emission Reporting | 1.0 % (only if manufactured by the strong acid process, no supplier notification) |

15.2 US State Regulations

Triethanolamine (102-71-6)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Isopropyl alcohol (67-63-0)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

| Revision Date             : 03/08/2016 |
| Other Information         : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200. |

GHS Full Text Phrases:

<p>| Acute Tox. 2 (Oral)       | Acute toxicity (oral) Category 2 |
| Acute Tox. 3 (Dermal)     | Acute toxicity (dermal) Category 3 |
| Acute Tox. 4 (Oral)       | Acute toxicity (oral) Category 4 |
| Aquatic Acute 1           | Hazardous to the aquatic environment - Acute Hazard Category 1 |
| Aquatic Acute 3           | Hazardous to the aquatic environment - Acute Hazard Category 3 |
| Aquatic Chronic 1         | Hazardous to the aquatic environment - Chronic Hazard Category 1 |
| Aquatic Chronic 3         | Hazardous to the aquatic environment - Chronic Hazard Category 3 |
| Eye Irrit. 2A             | Serious eye damage/eye irritation Category 2A |
| Flam. Liq. 2              | Flammable liquids Category 2 |
| Repr. 2                   | Reproductive toxicity Category 2 |
| STOT RE 1                 | Specific target organ toxicity (repeated exposure) Category 1 |</p>
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>STOT SE 1</td>
<td>Specific target organ toxicity (single exposure) Category 1</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>Specific target organ toxicity (single exposure) Category 3</td>
</tr>
<tr>
<td>H225</td>
<td>Highly flammable liquid and vapor</td>
</tr>
<tr>
<td>H300</td>
<td>Fatal if swallowed</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td>H311</td>
<td>Toxic in contact with skin</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H336</td>
<td>May cause drowsiness or dizziness</td>
</tr>
<tr>
<td>H361</td>
<td>Suspected of damaging fertility or the unborn child</td>
</tr>
<tr>
<td>H370</td>
<td>Causes damage to organs</td>
</tr>
<tr>
<td>H372</td>
<td>Causes damage to organs through prolonged or repeated exposure</td>
</tr>
<tr>
<td>H400</td>
<td>Very toxic to aquatic life</td>
</tr>
<tr>
<td>H402</td>
<td>Harmful to aquatic life</td>
</tr>
<tr>
<td>H410</td>
<td>Very toxic to aquatic life with long lasting effects</td>
</tr>
<tr>
<td>H412</td>
<td>Harmful to aquatic life with long lasting effects</td>
</tr>
</tbody>
</table>

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SDS US (GHS HazCom)