SECTION 1 - CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Pfizer Inc.
Animal Health Group
812 Springdale Drive
Exton, PA 19341
Emergency telephone: 1-800-228-5635
Hours of operation: 24 Hours
Telephone: 1-800-877-6250

Trade names: DECTOMAX(R) pour-on solution
Product name: Doramectin pour-on solution
Chemical family: Avemectin macrocyclic lactone
Therapeutic use: Antiparasitic (veterinary); endectocide
Description: Clear, colorless solution or clear, blue solution.

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS number</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doramectin</td>
<td>117704-25-3</td>
<td>Trade secret</td>
</tr>
<tr>
<td>Cetearyl octanoate</td>
<td>Not assigned</td>
<td>Trade secret</td>
</tr>
<tr>
<td>Isopropanol</td>
<td>67-63-0</td>
<td>Trade secret</td>
</tr>
</tbody>
</table>

Note: Ingredients indicated as hazardous have been assessed under US OSHA Hazard Communication Standard for workplace safety (29 CFR 1910).

SECTION 3 - HAZARDS IDENTIFICATION

NOTE: This document has been prepared in accordance with the US OSHA Hazard Communication Standard, which requires the inclusion of all known hazards of the product or its ingredients regardless of the potential risk. The precautionary statements and warnings included were selected with the anticipated use of the product in mind, but may not apply in all cases. Your needs may vary depending upon the potential for exposure in your workplace. If your workplace is regulated by OSHA, this document must be used as a part of a complete hazard-training program.

Signal word: WARNING!

Statements of hazard: FLAMMABLE LIQUID AND VAPOR. MAY BE HARMFUL IF SWALLOWED OR INHALED. MAY BE A REPRODUCTIVE HAZARD (BASED ON ANIMAL DATA). DANGEROUS FOR THE ENVIRONMENT.

Eye effects: Irritation may occur following direct contact. Symptoms might include redness, swelling, discharge, blurred vision, pain or permanent eye damage.

Skin effects: Prolonged or repeated contact may cause defatting and drying of the skin.

Inhalation effects: Inhalation of large amounts of isopropanol may be harmful.

Ingestion effects: Harmful if swallowed. See 'Other potential health effects', below.

Other potential health effects: Signs and symptoms of isopropanol overexposure may include headache, dizziness, drowsiness, and loss of consciousness.

SECTION 4 - FIRST AID MEASURES

Eyes: Immediately flush eyes with water for at least 15 minutes. Get medical attention.

Skin: Wash skin with soap and water. Remove contaminated clothing and shoes. Wash clothing and thoroughly clean shoes before reuse. If irritation occurs or persists, get medical attention.

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. Get medical attention immediately.

Ingestion: Get medical attention immediately. Do not induce vomiting unless directed by medical personnel. Never give anything by mouth to an unconscious person.

SECTION 5 - FIRE FIGHTING MEASURES

General hazard: Flammable liquid. Vapors may form explosive mixture with air.

Fire fighting instructions: Wear approved positive pressure, self-contained breathing apparatus and full protective turn out gear. Evacuate area and fight fire from a safe distance. Dike and collect water used to fight fire.

Extinguishing media: Powder, alcohol-resistant foam, large quantities of water, carbon dioxide

Hazardous combustion products: Emits toxic fumes of carbon monoxide, carbon dioxide and oxides of nitrogen.

Flash point: 37.4 deg F
Autoignition: 425 deg C

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Small spill: Contain the source of the spill or leak if it is safe to do so. Use noncombustible material to absorb spill; then place in a suitable, labeled recovery container. Clean spill area thoroughly.

Large spill: Review Sections 3, 8 and 12 before proceeding with clean up. Contain the source of the spill or leak if it is safe to do so. Dike, pump, or use noncombustible material to absorb spill; then place in a suitable, labeled recovery container. Put saturated absorbent material into a labeled container. Close container and move it to a secure holding area.

SECTION 7 - HANDLING AND STORAGE

General handling: Eliminate possible ignition sources (e.g., heat, sparks, flame, impact, friction, electricity), and follow appropriate grounding and bonding procedures. Use only in a well-ventilated area. Do not get in eyes. Avoid contact with skin and clothing. Do not breathe vapor or mist.

Storage conditions: Store out of direct sunlight in a cool, well ventilated dry area. Protect from light. Keep container tightly closed when not in use.

Temperature range for storage: <30 deg C

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limits

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Issued by</th>
<th>Type</th>
<th>OEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doramectin</td>
<td>Pfizer</td>
<td>TWA-8 HR</td>
<td>0.2 mg/m3</td>
</tr>
<tr>
<td>Isopropanol</td>
<td>ACGIH</td>
<td>TWA-8 HR</td>
<td>200 ppm</td>
</tr>
<tr>
<td></td>
<td>ACGIH</td>
<td>STEL</td>
<td>400 ppm</td>
</tr>
<tr>
<td></td>
<td>OSHA</td>
<td>TWA-8</td>
<td>400 ppm</td>
</tr>
</tbody>
</table>

Measurement method

Doramectin: CAM-JWT-93-08 (contact Pfizer for additional details).

Ventilation: Engineering controls should be used as the primary means to control exposures. Good general ventilation should be sufficient to control airborne levels. For laboratory use, handle in a lab hood.

Eye protection: Chemical splash goggles are recommended if eye contact is possible.
Skin protection: Use protective clothing (uniforms, lab coats, disposable coveralls, etc.) in both production and laboratory areas.

Hand protection: Chemical protective gloves

Respiratory protection: If the applicable Occupational Exposure Limit (OEL) is exceeded, wear an appropriate respirator with a protection factor sufficient to control exposures to below the OEL.

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**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

**Flammability limits:**
- Lower limit: 2
- Upper limit: 12

**Physical form:** Liquid

**Color:** Colorless or Blue

**Clarity:** Clear

**Odor:** Characteristic odor of isopropanol

**Water solubility:** Doramectin is insoluble (25 ppb @ 25 deg C).

**Solvent solubility:** Doramectin is freely soluble in methylene chloride or methanol and soluble in isopropanol.

**Additional information:** Specific gravity = 0.796 - 0.799 at 25 deg C (DECTOMAX pour-on solution).

**Reactivity:** Stable

**Incompatibilities:** Strong oxidizers

**Explosive properties:** Flammable liquid

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**SECTION 10 - STABILITY AND REACTIVITY**

**Eye:** Evidence of moderate to severe irritation was observed when isopropanol was tested in the standard Draize test at doses of 10 or 100 mg/24H in the rabbit.

**Skin:** The acute dermal LD50 for isopropanol in rabbits is reported to be 12,800 mg/kg.

**Inhalation:** The acute LC50 for isopropanol in rats is reported to be 16,000 ppm for 8-hours.

**Ingestion:** Acute oral LD50s for the active ingredient are listed above in the table. The differences seen in the acute oral LD50 ranges listed above demonstrate the effect that varying the vehicle can have on the toxic potential of doramectin. When administered to rats in an aqueous suspension, the LD50 ranges were 500 - 100 mg/kg for females and 1000 to 2000 mg/kg for males. When administered in sesame oil, a nonaqueous vehicle, the acute toxicity was greater with LD50 ranges of 50 - 100 mg/kg for female rats and 100 to 200 mg/kg for male rats. Because the human digestive tract is primarily an aqueous environment, it may be assumed that the more relevant vehicle for assessing occupational exposure would be the aqueous suspension.

**Mutagenicity:** No evidence of mutagenicity was observed for doramectin when tested in vitro and in vivo in the following assays: the Ames test, the mouse lymphoma L5178Y assay and the unscheduled DNA synthesis (UDS) assay in cultures of rat hepatocytes.

Subchronic effects: Repeat-dose and subchronic oral toxicity studies of doramectin were conducted in rats at doses up to 8 mg/kg for 3 months and in dogs at doses up to 4 mg/kg for 1 month or 2 mg/kg for 3 months. In rats, no evidence of drug-related toxicity other than increased absolute and relative liver weight was seen in high-dose females. In a 1-month study in dogs, decreased food consumption and body weight was seen in all treated animals, but was most pronounced at high dose (4 mg/kg/day). High-dose males also exhibited tremors, salivation and ataxia; emesis was observed in high-dose females. During the two 3-month studies in dogs, no drug-related effects were seen on body weight, food consumption, vital signs, serum chemistry, hematology or urinalysis values. A dose-dependent mydriasis (pronounced or abnormal pupillary dilation) was the primary clinical observation in these treated animals; a no-effect level (NOEL) of 0.1 mg/kg/day was established for this effect.

**Chronic effects/carcinogenicity:** No carcinogenic data available. However, the carcinogenic potential of a structurally related avermectin has been investigated in rodents. No evidence of carcinogenicity was seen in these studies.

Carcinogen status: None of the components of this formulation are listed as a carcinogen by IARC, NTP or OSHA.

**OSHA carcinogen:** No

**NTP carcinogen:** Not classified

**IARC carcinogen:** Not classified

**Reproductive effects:** No reproductive effects were observed in a two-generation oral toxicity study in rats.

**Teratogenicity:** No evidence of drug-related maternal toxicity, embryotoxicity or teratogenicity was seen in mice or rats at doses up to 6 mg/kg. However, increased embryomortality was seen in mice at 6 mg/kg/day. Delayed developmental abnormalities were seen in the rabbit at 1.5 and 3 mg/kg/day. Also, fetotoxicity was seen in the rabbit at a maternally toxic dose 3 mg/kg/day.

**At increased risk from exposure:** This material has been shown in rats to be excreted in milk and, as a result, to cause delayed development of rabbit fetuses; therefore, pregnant women and females planning to have a child should also exercise caution regarding exposure.

**PART II SAFETY INFORMATION**

**Disposal procedure:** Do not dispose of even small amounts in the sanitary sewer, stormwater sewer, lakes, streams, or ponds. Incineration is the recommended method of disposal for this material. Treatment, storage, transportation and disposal must be in accordance with applicable Federal, State, and Local regulations.
SECTION 14 - TRANSPORTATION INFORMATION

Proper shipping name: Flammable liquid, n.o.s. (contains isopropanol)
Identification number: UN 1993
Hazard class: 3
Packing group: II
U.S. DOT labeling requirements: FLAMMABLE LIQUID
IATA class: 3
IATA packing group: II

SECTION 15 - REGULATORY INFORMATION

TSCA status: Not listed
SARA section 302: No
SARA section 313: No
California proposition 65: Not listed
WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

EC Classification/Labelling
Classification: Toxic to Reproduction; Category 3
Labelling: Flammable; (F) Harmful; (Xn) Dangerous for the Environment; (N)

Risk phrases
R11 - Highly flammable.
R50 - Very toxic to aquatic organisms.
R61 - May cause harm to the unborn child.
R64 - May cause harm to breastfed babies.

Safety phrases
S7 - Keep container tightly closed.
S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.
S16 - Keep away from sources of ignition - No smoking.
S57 - Use appropriate container to avoid environmental contamination.

SECTION 16 - OTHER

Disclaimer: Pfizer Inc believes that the information contained in this Material Safety Data Sheet is accurate, and while it is provided in good faith, it is without a warranty of any kind, expressed or implied.

00100a - Doramectin pour-on solution
Revision date: 1/17/2000, Version: 2-4-0

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COMPAS Code: 30340031