MATERIAL SAFETY DATA SHEET

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SECTION 1: CHEMICAL IDENTIFICATION

Product name: **Dornim ( EMA- LUF )**  
Manufacturer: Dor.Ky D&D LTD  
P.O.B. 232, Nes Ziona 70400, Israel  
Tel : (+)-972-8-9432646 Fax (8) 972-8-9330109  
Emergency Tel.: The Israeli Poisoning Center ☎ +972 4 854 1900   +972 4 854 2092

SECTION 2: COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lufenuron</td>
<td>103-07-8</td>
<td>20 gr/Liter</td>
</tr>
<tr>
<td>Emamectin Benzoate</td>
<td>155569-91-8</td>
<td>12.5 gr/l</td>
</tr>
<tr>
<td>Dimethyl amide of fatty acid</td>
<td>14433-76-2</td>
<td>30-60 gr/l</td>
</tr>
<tr>
<td>BHT</td>
<td>128-37-0</td>
<td>2-4 gr/l</td>
</tr>
<tr>
<td>ingredients determined to be not hazardous</td>
<td></td>
<td>up to 1000 ml</td>
</tr>
</tbody>
</table>

Form: milky liquid  
Odor: specific odor.

SECTION 3: HAZARDS IDENTIFICATION

Label Precautionary Statements:
- Toxic liquid  
- Harmful if inhaled or swallowed. Avoid contact with eyes and skin.  
- Avoid inhaling vapor or spray mist.  
- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

SECTION 4: FIRST-AID MEASURES

In case of poisoning by any exposure route contact a doctor or Poisons Information Centre.  
Swallowed: If poisoning occurs contact a doctor or Poisons Information Centre. If swallowed DO NOT induce vomiting. Give a glass of water. Begin artificial respiration if victim is not breathing. Use mouth to nose rather than mouth to mouth.  
Eye: Will irritate the eyes. Avoid contact with eyes. If product gets in eyes wash it out immediately with water.  
Skin: Will irritate the skin. Avoid contact with skin. If skin contact occurs remove contaminated clothing and wash affected areas thoroughly with soap and water.  
Inhaled: Move person to fresh air and keep at rest until recovered.
ADVICE TO DOCTOR
This material is believed to enhance GABA activity in animals. It is probably wise to avoid drugs that enhance GABA activity (barbiturates, benzodiazepines, valproic acid) in patients with Potentially toxic mectin exposure. Toxicity can be minimised by early administration of chemical absorbents (e.g. activated charcoal). If toxicity from exposure has progressed to cause severe vomiting, the extent of resultant fluid and electrolyte imbalance should be gauged. Appropriate supportive parental fluid replacement therapy should be given, along with other required supportive measures as indicated by clinical signs, symptoms and measurements.

SECTION 5: FIRE FIGHTING MEASURES

This product is combustible. Extinguish warehouse and factory fires using fine-water spray or foam. During a fire, this product may release smoke and hazardous decomposition products. When fighting a major fire wear an air-supplied respirator.

SECTION 6: ACCIDENTAL RELEASE MEASURES

In case of spillage, it is important to take all steps necessary to:
* Avoid eye and skin contact.
* Avoid contamination of waterways.

Procedure for spill:
Remove heavily contaminated soil layer and bury in a safe place away from water supplies.
1. Keep all bystanders away.
2. Wear goggles, half face-piece respirator with combined dust and vapor cartridge, full length clothing and PVC gloves.
3. Reposition any leaking containers so as to minimize further leakage.
4. Dam and absorb spill with an absorbent material (e.g. sand or soil).
5. Shovel the absorbed spill into drums.
6. Dispose of the absorbed material will depend upon the extent of the spill.
* For quantities up to 50L of product bury in a secure landfill site.
* For quantities greater than 50L seek advice from the manufacturer (use emergency contact number Below) before attempting disposal. Contain in a secure location until disposal method is established.
7. Decontaminate the spill area with detergent and water and rinse with the smallest volume of water practicable.

SECTION 7: HANDLING AND STORAGE

Store away from sun and damp, in original tightly closed containers, in well ventilated area apart from food or feed.
Avoid storage in temperatures below -5°C and above 45°C.
SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

No exposure standards have been set for the components of this product.

**Exposure Potential -**

**Re-entry Period** - Under field conditions the spray should be allowed to dry on the foliage before re-entry into treated areas.

**ENGINEERING CONTROLS**

No special requirements. Product is used outdoors.

**PERSONAL PROTECTION**

Harmful if inhaled or swallowed. Will irritate the eyes and skin. Avoid contact with eyes and skin. Avoid inhaling vapor or spray mist. When opening the container and preparing the spray and using the prepared spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow length PVC gloves and face shield or goggles. If product on skin, immediately wash area with soap and water. After use and before eating, drinking or smoking wash hands, arms and face thoroughly with soap and water. After each day’s use, wash gloves and face shield or goggles and contaminated clothing.

This product is non flammable

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**Formulation type:** emulsion concentrate in water - EW  
**Active Ingredient:** Emamectin Benzoate + Lufenuron  
**Molecular Formula:** Emamectin Benzoate C_{49}H_{75}NO_{13}  
Lufenuron C_{17}H_{10}Cl_{2}F_{8}N_{2}O_{3}

**USE:** Insecticide,

**PHYSICAL DESCRIPTION/PROPERTIES**

**Appearance:** milky liquid  
**Flash Point:** min. 80°C Pensky martens  
**Odor:** specific odor  
**Flammability:** non flammable  
**Combustibility:** Combustible  
**Behavior in water:** Emulsifiable  

**OTHER PROPERTIES**

**Viscosity:** No data  
**Corrosiveness:** Non corrosive  
**Volatility:** No data  
**pH value:** 4-8  
**Density:** 0.96-1.0 g/cm³

SECTION 10: STABILITY AND REACTIVITY

**Stability:** stable.  
**Conditions to avoid:** keep away from heat, spark and open flame.
SECTION 11: TOXICOLOGICAL INFORMATION

Toxicity
POTENTIAL HEALTH EFFECTS

Acute oral: LD 50 - 5000 mg/Kg (Sprague Dawley rats)
Acute dermal: LD 50 >2000 mg/Kg (Sprague Dawley rats)
Acute inhalation: LC 50 >1.6 mg/Liter (rats)

Skin irritation: non irritant (New Zealand white rabbit)

Eyes irritation: classified as minimally irritant as per criteria of modified Kay and Calandra interpretation.
Skin sensitization: non sensitizer as observed by the method of the Guinea pig maximization test (meganusson and Kligman1970) however, is classified as week sensitizer as per ECETOC Monograph No. 14, 1990. Sensitization incidence Index (SII) =0.0%.

CHRONIC (Active Ingredient)
Emamectin Benzoate technical has been extensively tested on laboratory mammals and in test tube systems. No evidence of mutagenic, carcinogenic, teratogenic or reproductive effects was obtained.

SECTION 12: ECOLOGICAL INFORMATION

Avoid contamination of any water supply with chemical or empty container

Moderately toxic to fish.

SECTION 13: DISPOSAL CONSIDERATIONS

(a) Triple rinsing or preferably pressure rinsing containers with water. Add the rinsing to the spray tank. DO NOT dispose of undiluted chemicals on site.
(b) If recycling, replace cap and return clean containers to recycler or designated collection point.
(c) If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots.
(d) Burning of empty containers if circumstances, especially wind conditions, permit is an alterative method.

SECTION 14: TRANSPORT INFORMATION

UN Number: 3082  PG III Class 9

Marine Pollutant yes

Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s.

Regulated limit: N/A

Do not ship with food, cosmetics or medical supplies.

Notes: During transport, Pack strictly to prevent leakiness.
SECTION 15: REGULATORY INFORMATION

Information appearing on label:
   Wear suitable protective clothing, gloves and eye/face protection. Avoid breathing vapor or 
dust. Avoid unnecessary exposure.
   Prevent contact with eyes, mouth and nose while using this product. In case of contact with 
eyes or skin, rinse immediately with plenty of water. In case of inhalation, relocate to ensure 
thorough ventilation. If swallowed and provided person is conscious, wash out mouth with 
water provided person is conscious. Seek medical advice (show the label where possible). 
Keep away from reach of children, animals, drinking water, food and feed.
   Toxic liquid.
   Slightly toxic to fish.

SECTION 16: OTHER INFORMATION

The above information is believed to be correct and is based on the most current and valid 
information known to us to date.