IRB/TSS PRECAUTIONARY LABEL REVIEW

IN 4/10/87 OUT 7/22/87

ACTION CODE: 161

REVIEWER: Donna Williams

PRODUCT MGR. NO. 17

Record Number(s) 191,828

FILE OR REG NO. 2724-UNR

PRODUCT NAME ZOECON RF-299 RTU CARPET PUMP SPRAY

COMPANY NAME & Zoecon Industries, Division of Zoecon Corp.

ADDRESS 12200 Denton Dr., Dallas, TX 75234

SUBMISSION PURPOSE New product registration

CHEMICAL & FORMULATION Ready to Use Non-Aerosol Spray (0.007% Methoprene and 0.25% Permethrin ai; 99.743 % inert ingredients).

PRODUCT USES Applied to carpets, rugs, upholstery and pet bedding to control fleas.

COMMENTS AND RECOMMENDATIONS:

1. All studies submitted are acceptable and the product was assigned the following categories:

<table>
<thead>
<tr>
<th>TOX CAT</th>
<th>CORE CLASS</th>
<th>MRID#</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACUTE ORAL LD 50</td>
<td>IV</td>
<td>MINIMUM</td>
</tr>
<tr>
<td>ACUTE DERMAL LD50</td>
<td>III</td>
<td>MINIMUM</td>
</tr>
<tr>
<td>EYE IRRITATION</td>
<td>III</td>
<td>MINIMUM</td>
</tr>
<tr>
<td>SKIN IRRITATION</td>
<td>IV</td>
<td>MINIMUM</td>
</tr>
<tr>
<td>DERMAL SENSITIZATION</td>
<td>Non-</td>
<td>MINIMUM</td>
</tr>
</tbody>
</table>
       Sensitizer

2. Acute Inhalation study conducted on Zoecon RF-252 Aerosol, EPA Reg No. 2724-322 is applicable to support this data requirement. Placing this product in TOX CAT IV for acute inhalation.

3. Labeling is partially acceptable, "Practical Treatment Statement" (heading) needs to be positioned above individual statements.
TEST ARTICLE: RTU 206-106-1 [0.13% permethrin & 0.18% hydroprene]

TEST FACILITY & ADDRESS
Mideco, Inc.
520 Wakara Way
Salt Lake City, UT 84108

STUDY SUMMARIES:

1. ACUTE ORAL LD₅₀ (LIMIT TEST)
   EPA MRID NO. 40106001
   STUDY NO. 58551; STUDY INITIATED 5-20-85
   Conforms with Health Assessment Guidelines (81-1) Y/N YES
   Deviations from guidelines NONE
   Level(s) Tested 5M & 5F SD rats: 5100 mg/kg undiluted, oral gavage.
   Significant Toxic Signs Unremarkable.
   Significant Necropsy Findings Unremarkable.
   \[ \text{LD₅₀} \]
   \[
   \begin{align*}
   \text{(Males)} & > 5100 \text{ mg/kg} & \text{0% Mortality} \\
   \text{(Females)} & > 5100 \text{ mg/kg} & \text{0% Mortality} \\
   \text{(Combined)} & > 5100 \text{ mg/kg} & \text{0% Mortality}
   \end{align*}
   \]
   Core Classification MINIMUM (If Supplementary list deficiencies)

   Product Toxicity Category for this route of exposure IV

2. ACUTE DERMAL LD₅₀ (LIMIT TEST)
   EPA MRID NO. 40106002
   STUDY NO. 58552; STUDY INITIATED 5/31/85
   Conforms with Health Assessment Guidelines (81-2) Y/N YES
   Deviations from guidelines NONE
   Level(s) Tested 5M & 5F NZ White rabbits: 2.1 g/kg undiluted. Clipped intact skin.
   24-hour occluded exposure.
   Significant Toxic Signs One mortality (female), diarrhea, well-defined to moderate
   erythema and slight edema.
   Significant Necropsy Findings Kidney and lung discoloration. Expired animal; ocular
   and nasal discharge.
   \[ \text{LD₅₀} \]
   \[
   \begin{align*}
   \text{(Males)} & > 2.1 \text{ g/kg} & \text{0% Mortality} \\
   \text{(Females)} & > 2.1 \text{ g/kg} & \text{10% Mortality} \\
   \text{(Combined)} & > 2.1 \text{ g/kg} & \\
   \end{align*}
   \]
   Core Classification MINIMUM (If Supplementary list deficiencies)

   Product Toxicity Category for this route of exposure III
3. PRIMARY EYE IRRIGATION

**FILE OR REG NO.** 2724-UNR  
**EPA MRID NO.** 40106003

**STUDY NO.** 58554; **STUDY INITIATED** 5-20-85

Conforms with Health Assessment Guidelines (81-4) **Y/N** YES  
Deviations from guidelines **NONE**

**Level(s) Tested** 9 NZ White rabbits: 0.1 ml undiluted corneal surface (application).  
3 washed 60 sec post-application. 6 no wash.

Ocular Findings [list number of animals eliciting response and period of duration]
- corneal opacity: 1/6 (unwashed) at 72-hrs, clearing by day-10.
- iritis: none exhibited
- conjunctivae: 6/6 (unwashed) & 3/3 (washed) at 24-hrs. 1/6 (unwashed) at day-7, clearing by day-10.

**Core Classification** MINIMUM  
(If Supplementary list deficiencies)

**Product Toxicity Category for this route of exposure** III

4. PRIMARY DERMAL IRRITATION

**FILE OR REG NO.** 2724-UNR  
**EPA MRID NO.** 40106004

**STUDY NO.** 58553; **STUDY INITIATED** 5-21-85

Conforms with Health Assessment Guidelines (81-5) **Y/N** YES  
Deviations from guidelines **NONE**

**Level(s) Tested** 6 NZ White rabbits: 0.5 mlst undiluted. Clipped intact skin. 4-hour occluded, 4 test sites.

**Dermal Findings** [list number of animals eliciting response and period of duration]
- erythema: 6/6 well-defined at 24 & 72-hrs. 6/6 very slight at 24 & 72-hrs.
- edema: none exhibited.

**PDIS** 1.46  
**Core Classification** MINIMUM  
(If Supplementary list deficiencies)

**Product Toxicity Category for this route of exposure** IV

5. DERMAL SENSITIZATION

**FILE OR REG NO.** 2724-UNR  
**EPA MRID NO.** 40106005

**STUDY NO.** 58555; **STUDY INITIATED** 6-04-85

Test Method Used Buehler Test  
Deviations from accepted test method None.

**Concentration Tested** 1% Hartley guinea pigs: undiluted. Clipped intact skin. 3, 6-hour repeat applications (same site).

**Positive Control** 0.2% DNCB in 80% ethanol/water.

**Induction Findings/ Mean Score** no dermal irritation elicited.
**Challenge Findings/ Mean Score** no dermal irritation elicited.

**Product Classification** Non-Sensitizer  
**Core Classification** MINIMUM