UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

26/NOV/2007

MEMORANDUM

Subject: Name of Pesticide Product: **GF-1274**
EPA Reg. No. /File Symbol: 62719-LAO
DP Barcode: 346311
Decision No: 369825
PC Code: 108702

From: Masih Hashim, Toxicologist
Technical Review Branch
Registration Division (7505P)

MH Brant Boerman 11-27-2007

To: James Stone, RM Team 23
Herbicide Branch
Registration Division (7505P)

Applicant: Dow AgroSciences LLC
9330 Zionsville Road
Indianapolis, IN 46268

FORMULATION FROM LABEL:

| Active Ingredient(s): | % by wt. |
|---|---|
| XDE-742 | 7.5 |
| Inert Ingredient(s): | 92.5 |
| Total: | 100.0% |

**ACTION REQUESTED**: RM requests review of acute inhalation study (MRID 47265901) submitted in response to TRB's previous denial of a waiver request for this study.

**BACKGROUND**: Dow AgroSciences LLC had submitted 5 acute toxicity studies (MRIDs 46907703, 04, 06, 07 and 08 and 47265901) for GF-1274. This (end use) product contains the new active ingredient, Pyroxsulam (XDE-742).

This DER for the end use product for GF-1274 is a part of the joint review process with Australia, Canada, and the United States.

**RECOMMENDATIONS**: The newly submitted acute inhalation toxicity study is acceptable. It meets Sub-Division F guidelines.

The acute toxicity profile for GF-1274, EPA File Symbol 62719-LAO is as follows:

| | | | |
|---|---|---|---|
| acute oral toxicity | IV | cited-acceptable | MRID 46907703 |
| acute dermal toxicity | IV | cited-acceptable | MRID 46907704 |
| acute inhalation toxicity | IV | acceptable | MRID 47265901 |
| primary eye irritation | III | cited-acceptable | MRID 46907706 |
| primary skin irritation | IV | cited-acceptable | MRID 46907707 |
| dermal sensitization | negative | cited-acceptable | MRID 46907708 |

**LABEL:**

#62719-569 Product#GF-1274

**PRECAUTIONARY STATEMENTS**

**SIGNAL WORD: CAUTION**

**Hazards to Humans and Domestic Animals:**

Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Wear long-sleeved shirt and long pants, socks, shoes, and gloves. Remove and wash contaminated clothing before reuse. Avoid contact with eyes or clothing. Wear protective eyewear (optional).

**First Aid:**

If in eyes:
-Hold eye open and rinse slowly and gently with water for 15-20 minutes.
-Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.
-Call a poison control center or doctor for treatment advice.
Have the product container or label with you when calling a poison control center or doctor or going for Treatment

**Reviewer:** Masih Hashim **Date:** Nov 26, 2007

**Risk Manager (EPA):** 23

**STUDY TYPE:** Acute Inhalation Toxicity – Rat; OPPTS 870.1300; OECD 403

**TEST MATERIAL:** GF-1274 (Pyroxsulam [XDE-742] 7.8 wt%, Cloquintocet-mexyl 8.5 wt%) Lot #E 1967-28, TSN105595, White/off white powder

**CITATION:** Lowe, C. (2007) Acute Inhalation Toxicity Study in Rats. Limit Test. Study Number 23052. Eurofins, Product Safety Laboratories, Dayton, NJ 08810, USA. October 18, 2007. MRID 47265901

**SPONSOR:** Dow Chemical Company, Midland, MI 48674, USA

**EXECUTIVE SUMMARY:** In an acute inhalation toxicity study (MRID 47265901), groups of young adult Fischer 344 rats (5/sex, age 9 weeks, wt males 176-199g, females 148-162g, source Ace Animals, Boyertown, PA) were exposed by (nose-only) inhalation to the aerosolized test substance (as received) at a concentration of 5.06 mg/L for 4 hours. The animals were observed for 14 days. The MMAD was 3.2 µm and the GSD 1.82.

All animals survived the test. Clinical signs included hypoactivity and facial and ano-genital staining in all animals up to day 1. Rats then recovered from these signs and appeared healthy for the remaining course of the study. No other clinical signs were observed. Post exposure body weights were reduced during day 1-7, then were normal and surpassed pre-exposure weight by day 10. No gross lesions were noted at necropsy.

$LC_{50}$ Males > 5.06 mg/L (Gravimetric)
$LC_{50}$ Females > 5.06 mg/L
$LC_{50}$ Combined > 5.06 mg/L

Based on the rat $LD_{50}$ (>5.06 mg/L), the formulation is in EPA Toxicity Category IV for inhalation toxicity.

This study is classified as acceptable. It does satisfy the guideline requirements for an acute inhalation study (OPPTS 870.1300; OECD 403) in the rat.+

**COMPLIANCE:** Signed and dated GLP, Quality Assurance and Data Confidentiality statements were provided.

**RESULTS and DISCUSSION:**

| Nominal Conc. (mg/L) | Gravimetric Conc. (mg/L) | MMAD µm | GSD | Mortality/Number Tested | | |
|---|---|---|---|---|---|---|
| | | | | Males | Females | Combined |
| 26.21 | 5.08 | 3.2 | 1.82 | 0/5 | 0/5 | 0/10 |

| | |
|---|---|
| **Gravimetric Conc. (mg/L):** | **5.08** |
| **Chamber Volume (L):** | **6.7** |
| **Total Airflow (L/min):** | **31.7** |
| **Temperature** | **21-23°C** |
| **Relative Humidity** | **56-58%** |

**Particle size determination:** An eight-stage Andersen cascade impactor was used to assess the particle size distribution of the test atmosphere. Samples were withdrawn from the breathing zone of the animals at two intervals. The filter paper collection stages were weighed before and after sampling to determine the mass collected upon each stage. The aerodynamic mass median diameter and geometric standard deviation were determined graphically using two-cycle logarithmic probit axes.

A. **Mortality:** There were no deaths on the study.

B. **Clinical observations:** All animals survived the test. Clinical signs included hypoactivity in all animals and facial and ano-genital staining and day 1. Rats then recovered from these signs and appeared healthy for the remaining course of the study. No other clinical signs were observed. Post exposure body weights were reduced during day 1-7, then became normal and surpassed pre-exposure weight by day 10.

C. **Gross necropsy:** The gross necropsy conducted on each animal at termination of the study revealed no observable abnormalities.

D. **Reviewer's conclusions:** The $LC_{50}$ of GF-1274 is > 5.08 mg/L (Gravimetric). The product is in EPA Tox Category IV for inhalation study exposure.

1. **DP BARCODE:** 346311
2. **PC CODE:** 108702 (Pyroxsulam 7.8%); 700099 (Cloquintocet mexyl 8.5%)
3. **CURRENT DATE:** Nov 26, 2007
4. **TEST MATERIAL:** Pyroxsulam

| Study/Species/Lab Study # / Date | MRID | Results | Tox. Cat. | Core Grade |
|---|---|---|---|---|
| | | | | |
| | | | | |
| Acute inhalation toxicity/rat Eurofins/Product Safety/# 23052/10-18-07 | 47265901 | $LC_{50}$ Males > 5.08 mg/L<br>$LC_{50}$ Females > 5.08 mg/L<br>$LC_{50}$ Combined > 5.08 mg/L | IV | A |

A= acceptable