ORIGINAL

TSCA NON-CONFIDENTIAL BUSINESS INFORMATION

DOCUMENT DESCRIPTION	DOCUMENT CONTROL NUMBER	DATE RECEIVED
8EHQ-11-18335	88110000219	5/3/11

COMMENTS:

DOES NOT CONTAIN CBI

335115

DUPONT

RECEIVED
OPPT CBIC

11 MAY -3 AM 11:48

DuPont Haskell Global Centers
for Health and Environmental Sciences
1090 Elkton Road, P.O. Box 50
Newark, DE 19714-0050

May 2, 2011

Via Federal Express

8EHQ-11-18335

Document Processing Center (Mail Code 7407M)
Room 6428
Attention: 8(e) Coordinator
Office of Pollution Prevention and Toxics
U.S. Environmental Protection Agency
1201 Constitution Ave., NW
Washington, DC 20004

8EHQ-0511-18335A

DCN: 88110000219

88110000219

Dear 8(e) Coordinator:

2-propenenitrile
CAS # 107-13-1

DuPont received information from a third party on the above-referenced substance. DuPont has reviewed the information for reportability under TSCA 8(e) and provides below a summary of the information as received that has been determined to meet EPA's TSCA 8(e) criteria for reporting. It is unknown whether the information reported below has been previously reported to EPA by any third party or is otherwise considered known to the Administrator under TSCA 8(e) guidance.

Sprague-Dawley rats 6-7 weeks of age were randomly grouped by sex for treatment. There were 20 female rats in each of the 3 treatment groups receiving 35, 210 or 500 ppm acrylonitrile (AN) in the drinking water; 30 control rats had no test substance in their drinking water. The female rats were caged individually for the initial 60 days of the study. They were then grouped 2 females and 1 male/cage (all from the same treatment. level) for a 15 day mating period (3 estrus cycles). The males were selected at random from the male rats on a concurrent 90-day toxicity study. After the 15 day mating period, the females were placed in individual delivery cages containing ground corn cob litter for nesting. All rats were observed daily for changes in appearance and demeanor. Body weights were recorded at weekly intervals during the pretreatment and mating periods of the study. Food and water consumption were measured at least once each week during the study. After mating, the females were observed daily for signs of normal or abnormal parturition. The following records were maintained: date of parturition, number of live and dead newborn, number of live pups at days 1, 7, 14 and 21, litter weights on days I, 7 and 14, individual weanling weights on day 21 and the sex of each weanling on day 21. The following indices were calculated for each group of rats: fertility index (the proportion of females that were pregnant), gestation survival index (the proportion of newborn pups that were alive) and the 24-hr, 7, 14, and 21 day survival indices (the proportion of live born pups that survived 1, 7, 14 or 21 days, respectively). The weanling rats were necropsied at 21 days of age. All adult nursing females were necropsied at the time the pups were examined. The nonpregnant adult females were killed when it was determined that the time exceeded the normal gestation period. The nonpregnant adult females were killed by decapitation and a gross pathologic examination was performed.

No alterations in appearance or demeanor were noted in any of the rats throughout this study. The mean body weights of female rats maintained on drinking water containing 500 ppm the test substance were significantly lower than the body weights of control rats throughout the study. At 210 ppm, the mean body weights were significantly less than control values after about 40 days on test. The mean body weight of rats drinking water containing 35 ppm

CONTAINS NO CBI

CONTAINS NO CBI

CONTAINS NO CBI

the test substance was not significantly different from control values at any time during the study. The water consumption of rats at the 500 ppm concentration was significantly less than control values, being reduced by as much as 40-60% throughout much of the study. At 210 ppm, the water consumption was also significantly decreased throughout the majority of the study. At 35 ppm, water consumption was slightly less than that of control rats during the early part of the study, but was comparable to controls throughout gestation and lactation. At 500 ppm, food consumption was consistently significantly lower than among control rats during the entire study. At 210 ppm, food consumption was slightly decreased and in some cases to a statistically significant extent prior to mating but not during gestation or lactation. At 35 ppm, food consumption was not significantly different than among control animals except for one time during lactation when food consumption was significantly increased.

None of the indices used to measure the pregnancy rate or the survival of fetuses or neonates were altered by inclusion of the test substance in the drinking water. There was no significant effect on the sex ratio of the offspring or on the duration of time between the first day of breeding and the day of parturition. Ingestion of water containing 35 or 210 ppm the test substance had no significant effect on the mean body weight of neonates during lactation. In contrast, at 500 ppm, the mean body weight of pups was significantly less than control values on days 14 and 21 of lactation. This is not surprising, considering the significant decrease in water intake by the lactating females in this group. A decrease in fluid intake of nearly 50% would be expected to cause a considerable decrease in milk production and a resultant decrease in growth of nursing pups. A number of internal and external developmental variations were observed in soft tissues and skeletal structures but none at an incidence significantly different from those found in control litters.

All groups of animals contained rats with focal areas of hemolyzed blood adherent to the fundic mucosa of the stomach, but the number of rats involved and the severity of the effect was greatest at the high concentration of the test substance. In addition, the number of affected rats at the high concentration was greater among those nursing pups than among nonpregnant rats. The stomach from 5 rats at the highest concentration of the test substance was saved for histopathological examination to determine the origin of the hemorrhage. Multiple sections of the stomach revealed 2 small ulcers in the fundic portions of the stomach in one of the five rats. These were microscopic *in* size and were not visible grossly. These ulcers were manifested grossly as small foci of hemolyzed blood adhering to the mucosa. In no case was the hemorrhage severe enough to cause signs of anemia. A single adult female rat of the control group contained a subcutaneous tumor 1-1½ cm in diameter associated with the first mammary gland on the right side. No gross evidence of invasion or metastasis was found.

Sincerely,

S. Satheesh Anand, Ph.D., DABT
Senior Research Toxicologist

SSA/RV: clp
(302) 366-5314

FedEx Express *US Airbill*

FedEx Tracking Number 8729 8477 0450

RECIPIENT: PEEL HERE

1 From This portion can be removed for Recipient's records.

Date / / FedEx Tracking Number 872984770450

Sender's Name Phone

Company

Address Dept./Floor/Suite/Room

City State ZIP

2 Your Internal Billing Reference

3 To

Recipient's Name Phone

Company

Address

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City State ZIP

☐ HOLD Weekday FedEx location address REQUIRED. **NOT available for** FedEx First Overnight.

☐ HOLD Saturday FedEx location address REQUIRED. **Available ONLY for** FedEx Priority Overnight and FedEx 2Day to select locations.

8729 8477 0450

SPH33

Form ID No. 0215

4a Express Package Service * To most locations. ***Packages up to 150 lbs.***

☐ FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

☐ FedEx First Overnight — Earliest next business morning delivery to select locations.*

☐ FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

4b Express Freight Service ** To most locations. ***Packages over 150 lbs.***

☐ FedEx 1Day Freight — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected. FedEx 1Day Freight Booking No.

☐ FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

☐ FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.

☐ FedEx Envelope* ☐ FedEx Pak* Includes FedEx Small Pak and FedEx Large Pak. ☐ FedEx Box ☐ FedEx Tube ☐ Other

6 Special Handling and Delivery Signature Options

☐ SATURDAY Delivery **NOT available for** FedEx Standard Overnight, FedEx Express Saver, or FedEx 3Day Freight.

☐ No Signature Required — Package may be left without obtaining a signature for delivery.

☐ Direct Signature — Someone at recipient's address may sign for delivery. ***Fee applies.***

☐ Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. ***Fee applies.***

Does this shipment contain dangerous goods?

One box must be checked.

☐ No ☐ Yes As per attached Shipper's Declaration. ☐ Yes Shipper's Declaration not required. ☐ Dry Ice Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

☐ Cargo Aircraft Only

7 Payment ***Bill to:***

Enter FedEx Acct. No. or Credit Card No. below.

☐ Sender Acct. No. in Section 1 will be billed. ☐ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

Obtain recip Acct. No ☐

Total Packages / Total Weight ____ lbs. Credit Card Auth.

[1] Our liability is limited to $100 unless you declare a higher value. See the current FedEx Service Guide for details.

605

Rev. Date 2/10 • Part #158279 • ©1994–2010 FedEx • PRINTED IN U.S.A. SRS

fedex.com 1.800.GoFedEx 1.800.463.3339