8EHQ-0303-15307

American Chemistry Council

8EHQ-0303-15307

March 17, 2003

Hand Delivered

TSCA Document Control Office (7407)
EPA East Building, Room 6428
Office of Pollution Prevention and Toxics
U.S. Environmental Protection Agency
1201 Constitution Avenue N.W.
Washington, DC 20460-0001

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Attention: TSCA Section 8(e) Coordinator

RE: DCPD/Codimer Concentrate – Rat Range Finding Study

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Dear Sir or Madam:

The American Chemistry Council Olefins Panel submits this letter on behalf of certain of its members[1] pursuant to Section 8(e) of the Toxic Substances Control Act (TSCA) to inform EPA of certain findings in rats exposed to Dicyclopentadiene/Codimer Concentrate (DPCP/Codimer Concentrate). The Panel has not made a determination as to whether a significant risk of injury to health or the environment is actually presented by the preliminary findings.

DCPD/Codimer Concentrate was tested pursuant to the Olefins Panel's testing plan for the Resin Oils and Cyclodiene Concentrates Category under the High Production Volume Chemical Challenge Program.[2] The CAS Registry number used to identify DCPD/Codimer Concentrate is 68478-10-4 (Naphtha, petroleum, light steam-cracked, debenzenized, C8-16-cycloalkadiene conc.). This stream is isolated by distillation from the C8+ fraction of a thermally processed pyrolysis gasoline. DCPD/Codimer Concentrate typically contains about 40% DCPD, with the balance primarily codimers of cyclopentadiene with piperylene, butadiene and methylcyclopentadiene.

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1 The sponsor companies are Chevron Phillips Chemical Company LP, The Dow Chemical Company, Equistar Chemicals, LP, ExxonMobil Chemical Company, The Goodyear Tire & Rubber Company, NOVA Chemicals Inc., Noveon, and Shell Chemical Company LP.

2 The test plan is available at http://www.epa.gov/chemrtk/olefins/olefintp.pdf.

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Groups of 6 time-mated female rats were administered DCPD/Codimer concentrate once daily by gavage during days 12 – 19 of gestation. One female receiving the high dose, 500 mg/kg/day, was sacrificed in extremis on gestation day 17. In addition, 5 of 6 rats in the 500 mg/kg/day group had a small spleen size at necropsy, including the one rat sacrificed in extremis. Enlarged adrenal glands were also noted in two of 6 rats in this dose group, including the rat sacrificed in extremis.

A summary of the findings is enclosed. The final report is not yet available but will be forwarded when received from the laboratory.

If you have any questions, please contact me at 301 924 2006 or Elizabeth_Moran@americanchemistry.com.

Yours truly,

Elizabeth J. Moran, Ph.D.
Manager, Olefins Panel

cc: Richard H. Hefter (MC 7403)

Cc L. Belcher
A. M. Kaplan
S. E. Loveless
E. Mylchreest

February 25, 2003

Elizabeth Moran, Ph.D.
Managing Director, CHEMSTAR
American Chemistry Council
1300 Wilson Blvd.
Arlington, VA 22209

RE: Results of the DCPD range-finding study
(ACC Reference Number OLF-92.0-HPV789-DHL)

Dear Bette,

Groups of 6 time-mated female Crl:CD®(SD)IGS BR rats were administered dicyclopentadien/codimer concentrate once daily by gavage during days 12-19 of gestation (days 12-19G) at daily dosages of 0, 25, 100 or 500 mg/kg/day. During the in-life portion of the study, maternal body weights, food consumption, and clinical signs data were collected. On day 20G, all dams were euthanized and examined grossly. Gravid and empty uterine weights were recorded to permit calculation of the adjusted maternal final body weight. The uterine contents were examined and described; fetuses were weighed, sexed, and examined for any external alterations.

Dose-related reductions in maternal body weight, body weight gain, and/or food consumption occurred in rats administered 25, 100 or 500 mg/kg/day. Body weight loss occurred on days 12-18G for females dosed with 500 mg/kg/day, and decreased body weight gain persisted for the remainder of the study in females dosed with 500 mg/kg/day. During days 12-18G, food consumption values for rats in the 500 mg/kg/day group were less than 10 g per day.

One female in the 500 mg/kg/day group was sacrificed *in extremis* on gestation day 17 due to substantial body weight loss, and a prolonged period of not eating. This female was pregnant. Maternal animals in the 500 mg/kg/day group had clinical signs of dehydration, abnormal gait or mobility (described as an arched back while walking on tip toes), diarrhea, hunched over posture, feet retracted during handling, hypersensitivity, and wet and/or stained fur. In addition, 5/6 rats in the 500 mg/kg/day group had a small spleen size at necropsy, including the one rat sacrificed *in extremis*. Enlarged adrenals

were also noted in 2/6 rats in the 500 mg/kg/day group, including the one rat sacrificed *in extremis*.

Mortality did not occur at 100 mg/kg/day or below. Wet and/or stained fur was also noted in one animal in the 100 mg/kg/day group. There were no test substance-related clinical observations in animals administered 25 mg/kg/day. There were no test substance-related post-mortem observations in animals administered 100 mg/kg/day or below.

There were no effects on number of litters produced, early or late resorptions, implantations, corpora lutea, live fetuses, or dead fetuses in any dosage group.

A dose-related trend for reduced fetal weights (3%, 6%, 22%) was observed in the 25, 100, and 500 mg/kg/day groups, respectively. In addition, placental weight was reduced in the 500 mg/kg/day group. There were no fetal external malformations or variations observed in any dose group.

Parameter	0 mg/kg/day	25 mg/kg/day	100 mg/kg/day	500 mg/kg/day
Maternal body weight GD20	408.3	391.9	378.2	308.1
Corrected maternal body weight GD20 (g) (w/o products of conception)	320.6	312.3	308.0	253.2
Maternal body weight gain GD12-19 (g)	92.4	78.4	68.0	-11.3
Corrected maternal body weight gain GD 12-19 (g) (w/o products of conception)	4.7	-1.1	-2.2	-66.2
Maternal food consumption GD12-19 (g)	26.3	23.9	23.1	8.9
# pregnant	6/6	6/6	5/5	6/6
Implantations	15.5	14.2	13.6	12.8
Mean placental weight (g)	0.5252	0.4851	0.5626	0.3448
Early resorptions	0.8	0.3	1.4	0.2
Late resorptions	0	0.2	0	0.2
Corpora lutea	16.3	15.7	15.2	14.8
Fetal weight (g)	4.40	4.27	4.13	3.44
Live fetuses	14.7	13.7	12.2	12.4
Dead fetuses	0	0	0	0
Fetal external malformations/variations	0	0	0	0

Sincerely,

Linda A. Malley, Ph.D., D.A.B.T.
Study Director

Cc: L. Belcher
M. Kaplan
S. E. Loveless
E. Mylchreest