

201-14880B

**HIGH PRODUCTION VOLUME (HPV)  
CHEMICAL CHALLENGE PROGRAM**

**ROBUST SUMMARIES**

**For the**

**Polyethylbenzene Bottoms**

**CAS Number 68987-43-9**

**Prepared by:**

**American Chemistry Council  
Ethylbenzene Panel HPV Task Group  
Polyethylbenzene Bottoms Subteam**

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## ACUTE ORAL TOXICITY

### Test Substance

Identity: Polyethylbenzene Bottoms (CAS No. 68987-43-9)  
Purity: Not stated

### Method

Method/guideline followed: FIFRA/ TSCA guidelines  
Type: LD<sub>50</sub>  
GLP: Not stated  
Year: 1985  
Species/Strain: Fisher 344 Rat  
Sex: Male and female  
No. of animals per sex per dose: 5  
Vehicle: None  
Route of administration: Oral/ gastric intubation  
Remarks: At the start of experiment, animals were 65 days old with a weight ranging from 113 to 166 grams. During the study, room temperature averaged 72.8°F, and relative humidity averaged 55%. Each animal was observed at 1 hr and 4 hr after administration of the test substance and at least once daily for 14 days post dosing.

### Results

Remarks: >5.0 g/kg  
No mortality was observed during the study. Soft feces were observed at the 4-hour observation and on Days 2 and 3. Anogenital soiling was noted at the 4-hour observation and on Days 2,3, 6 and 8. Brown material around the nose and mouth was seen on some animals on Days 2 and 3. All animals were normal for all clinical observation intervals from Day 9 until study termination.

No adverse effects on body weights were observed throughout the study. Gross necropsies of the animals were performed and the observed tissues were within normal limits for the species.

### Conclusions

Based on the lack of mortality at 5.0 g/kg, PEB was assigned a descriptive classification for acute oral exposure of “practically non-toxic”.

**Data Quality**

Reliability (Klimisch):

1b

Remarks:

Reliable without restrictions, comparable to current guideline study.

**Reference**

Gulf Life Science Center. 1985. Acute Oral Toxicity Study in Rats of Polyethylene Bottoms. Project No. 84-2133

**Other**

Last changed:

October 20, 2003

Remarks:

None

## ACUTE DERMAL TOXICITY

### Test Substance

Identity: Polyethylbenzene (PEB) Bottoms  
(CAS No. 6897-43-9)  
Purity: Not stated

### Method

Method/guideline followed: Other  
Type: Five-day repeated dose  
GLP: Not stated  
Year: 1985  
Species/Strain: Fischer 344 Rat  
Sex: Male and female  
No. of animals per sex per dose: 5  
Vehicle: Light paraffin oil [CAS # 8012-95-1]  
Route of administration: Dermal  
Remarks: At the start of the experiment, animals were 70 days of age and weighed between 129.27 g to 206.32 g. During the study, animal rooms were maintained at an average ambient temperature of 73.6°F and relative humidity of 55.5%.

Prior to treatment initiation, the backs of all animals were clipped free of hair. Each animal was fitted with an Elizabethan collar to prevent ingestion of test or control substances. The three dose groups consisted of: vehicle control (light paraffin oil) [Group I], diluted low-dose (50%) PEB Bottoms [Group II], high dose (100%) PEB Bottoms [Group III]. The appropriate doses or test control substance were applied topically to the prepared back of 5 test animals per group for a period of 6 hours. Treatment was performed once daily for a total of 5 doses.

Animals were observed daily for clinical signs, mortality and moribundity. Dermal reactions were observed and scored twice on the initial dosing day and at the time of residual test substance removal. The Draize Scoring System for evaluating dermal reactions was used for scoring purposes. Body weights were recorded immediately prior to initial treatment and again at necropsy. All animals surviving to the scheduled study termination were sacrificed on Day 8 and gross necropsies on all animals were performed.

**Results/Conclusions**

All animals survived to the termination of the study. No mortality occurred as a result of the 5-day repeated dermal application of Polyethylbenzene Bottoms to male and female rats at dose levels of 1.0 g/kg (Group II) and 2.0 g/kg (Group III). Statistical analyses of group mean body weights revealed weight losses among males and females at both the 1.0 and 2.0 g/kg dose levels that were significant at the 99% confidence level.

A yellow brown discoloration of the test site was seen among all animals treated with the test substance. Dermal irritation was observed among animals in Groups II and III. Barely perceptible erythema was observed in the Group II (1.0 g/kg) animals. Erythema (ranging from very slight to well defined) and barely perceptible edema were seen among animals in Group III (2.0 g/kg).

Focal thickening of the skin at the point of application of the test substance was observed in Group III (2.0 g/kg).

**Data Quality**

Reliability (Klimisch):  
Remarks:

2a  
Reliable with restrictions; acceptable, well-documented study report which meets basic scientific principles

**Reference**

Gulf Life Sciences Center. 1985. Five –Day repeated dose dermal toxicity study in rats of Polyethylbenzene Bottoms. Project No. 84-2137

**Other**

Last changed:  
Remarks:

October 20, 2003  
None