

MR 6332
8EHQ - 0598 - 13886
+ 6333

May 7, 1998

Office of Pollution Prevention and Toxics
U. S. Environmental Protection Agency
401 M Street, S.W.
Washington, DC 20460

RECEIVED
APPT. 8/16
98 MAY 14 AM 11:08

Attention: TSCA 8(e) Coordinator

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Contains No CBi

Ladies and Gentlemen:

Eastman Chemical Company submits the following reports as required under TSCA §8(e) for your consideration.

✓ 8(e)98-3 Thirteen-Week Inhalation Study of Cyclopropanecarboxaldehyde in Rats

8(e)98-4 Four-Week Inhalation Study of Cyclopropanemethanol in Rats

If you have questions, you may contact me by telephone at (423) 229-4274 or the technical contact, Karen R. Miller, Ph.D., at (423) 229-1654. FAX (423) 224-0208

Very truly yours,

F. David Petke

(FAX) 224-0208

F. David Petke, Ph.D.
Senior Technical Associate
Product Safety and Stewardship

8EHQ-97-13886

cc: 8(e) file

89980000 196

8(e)9801.doc

RECEIVED
APPT. 8/16

RECEIVED
APPT. 8/16



PDL - 4897000136

MR
6332

TSCA HEALTH & SAFETY STUDY COVER SHEET - revised 6/25/96

TSCA CBI STATUS:

CHECK IF THIS PAGE CONTAINS CONFIDENTIAL BUSINESS INFORMATION (CBI)

Clearly mark the confidential information with bracketing and check the box in the appropriate section (Contains CBI).
Submit a sanitized cover sheet with CBI deleted. Mark the sanitized copy, "Public Display Copy" in the heading.

1.0 SUBMISSION TYPE <input type="checkbox"/> Contains CBI <input type="checkbox"/> 8(d) <input checked="" type="checkbox"/> 8(e) <input type="checkbox"/> FYI <input type="checkbox"/> 4 <input type="checkbox"/> Other: specify <input type="checkbox"/> Initial submission <input checked="" type="checkbox"/> Follow-up submission <input type="checkbox"/> Final report submission Previous EPA Submission or Title if Update or Follow-up: Docket Number, if any: # 8EHQ-97-13886 Two-Week Inhalation Study in the Rat of Cyclopropanecarboxaldehyde <input type="checkbox"/> continuation sheet attached		Submission date: May 6, 1998	
2.1 SUMMARY/ABSTRACT ATTACHED <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2.2 SUBMITTER TRACKING NUMBER OR INTERNAL ID 8(e)98-3	2.3 FOR EPA USE ONLY	
3.0 CHEMICAL/TEST SUBSTANCE IDENTITY <input type="checkbox"/> Contains CBI <u>Reported Chemical Name (specify nomenclature if other than CAS name):</u> Cyclopropanecarboxaldehyde CAS #: 1489-69-6 Purity: 100% <input checked="" type="checkbox"/> Single Ingredient <input type="checkbox"/> Commercial/Technical Grade <input type="checkbox"/> Mixture Trade Name: N/A Common Name: Same			
Other chemical(s) present in tested mixture <input type="checkbox"/> continuation sheet attached		None known % WEIGHT Contains No CBI	
4.0 REPORT/STUDY TITLE <input type="checkbox"/> Contains CBI Thirteen-Week Inhalation Toxicity Study of Cyclopropanecarboxaldehyde in Rats. (Preliminary Results) <input type="checkbox"/> continuation sheet attached			
5.1 STUDY/TSCATS INDEXING TERMS [CHECK ONE] HEALTH EFFECTS (HE): <input checked="" type="checkbox"/> ENVIRONMENTAL EFFECTS (EE): ENVIRONMENTAL FATE (EF):			
5.2 STUDY/TSCATS INDEXING TERMS (see instructions for 4-digit codes) STUDY TYPE: STOX Other:			
SUBJECT ORGANISM (HE,EE only): RATS Other:		ROUTE OF EXPOSURE (HE only): INHL Other:	
VEHICLE OF EXPOSURE (HE only): Other: AIR			
6.0 REPORT/STUDY INFORMATION <input type="checkbox"/> Contains CBI <input checked="" type="checkbox"/> Study is GLP Laboratory: <u>Health and Environment Laboratories, Eastman Kodak Company</u> <u>1100 Ridgeway Avenue, Rochester, NY 14652</u> Source of Data/Study Sponsor (if different than submitter) <input type="checkbox"/> continuation sheet attached			
		Report/Study Date: <u>Not yet available</u> Number of Pages: <u>Not yet known</u>	
7.0 SUBMITTER INFORMATION <input type="checkbox"/> Contains CBI Submitter: <u>Marc G. Schurger</u> Title: <u>Director, Product Safety and Regulatory Programs</u> Phone: <u>(423) 229-5921</u> Company Name: <u>Eastman Chemical Company</u> Company Address: <u>P. O. Box 431, Kingsport TN 37662-5280</u> Submitter Address (if different): Technical Contact: <u>Karen R. Miller, Ph.D.</u> Phone: <u>(423) 229-1654</u> <input type="checkbox"/> continuation sheet attached			
8.0 ADDITIONAL/OPTIONAL STUDY COMMENTS <input type="checkbox"/> Contains CBI <input type="checkbox"/> continuation sheet attached			

RECEIVED
EPA/CBI
98 MAY 14 9 12:57



8EHQ-97-13886

Submitter Signature: Marc G. Schurger

Date: 5/5/98



89980000196

9.0 CONTINUATION SHEET

TSCA CBI STATUS:

CHECK IF THIS PAGE CONTAINS CONFIDENTIAL BUSINESS INFORMATION (CBI)

Clearly mark the confidential information with bracketing and check the box in the appropriate section (Contains CBI).
Submit a sanitized cover sheet with CBI deleted. Mark the sanitized copy, "Public Display Copy" in the heading.

Submitter Tracking Number/Internal ID

8(e)98-3

Preliminary Results from a 13-Week Inhalation Neurotoxicity Study of
Cyclopropanecarboxaldehyde (CPCA)

In this study, male and female Sprague-Dawley rats were exposed to nominal concentrations of 0, 0.1, 0.3, or 1.0 mg/l of CPCA for 6 hours per day, 5 days per week excluding holidays (4 days per week when Functional Observational Battery (FOB) performed) for 14 consecutive weeks (minimum of 65 exposure days). Five animals per sex per group were designated for euthanasia and blood collection after 30 days on the test. Some animals from the high-dose and the control group were allowed to recover for a period of at least 28 days following termination of exposures. Animals were observed during and after exposure and once daily on non-exposure days. Body weights and feed consumption were measured weekly.

The following summarizes what we believe are the significant results. Minimal signs of toxicity such as reduced activity were observed during exposure to 0.3 and 1.0 mg/l test groups. Reduced feces, and porphyrin discharge from the nose were observed in all treated groups. After 30 days of exposure, 5 animals per sex per group were fasted and sacrificed. Blood was collected and analyzed for clinical chemistry and hematology. The white blood cell counts were significantly lower in the high-dose males. Aspartate aminotransferase (AST) and blood urea nitrogen (BUN) were significantly higher and cholesterol levels were decreased in the high-dose male and female treatment groups. After at least 65 exposures, animals were fasted and sacrificed. Blood was collected and analyzed for clinical chemistry and hematology. White blood cell counts were lower in the high-dose males and in the mid- and high-dose female groups. Red blood cells and hematocrit were increased in the high-dose males and in the mid-dose females. AST was increased in all treatment groups. BUN was increased in all female treatment groups and in the male mid- and high-dose groups. Alanine aminotransferase (ALT) was increased in all male treatment groups and in the female high-dose group. Sorbitol dehydrogenase (SDH) was increased in the male and female high-dose groups and in the female mid-dose group. Cholesterol was decreased in the male high-dose group.

Relative liver weights in all treated female groups and the high-dose males were significantly higher than for the control group. Testes and epididymides weights were decreased in the high-dose males. Histopathologic examinations were performed and the target organs were identified as the liver and heart (all animals), testes and epididymides (males) and sternal bone marrow. Lesions in the heart included myocarditis, muscle fiber vacuolation, and muscle fiber degeneration. These heart lesions were observed at all exposure levels for both male and female rats. These heart lesions were not reversible during a 28-day recovery period. Lesions in the liver included hepatocellular cytoplasmic vacuolation, which was observed at all exposure levels for both males and females. The liver lesions were not observed in animals that were allowed to recover for 28-days. Lesions in the testes included decreased sperm counts in the mid- and high-dose male groups and degeneration of spermatogenic germ cells in the high-dose males. The testicular lesions were not reversible following a 28-day recovery period. There was a decrease in cellularity within the sternal bone marrow in the 1.0 mg/l male and female groups, as well as limited decreases in the cellularity in the 0.3 mg/l females. The bone marrow effects were not observed in animals allowed to recover for 28-days. A no-observed-effect-level was not determined in this study.