8EHQ-0694-13095

Plant #1

EASTMAN

Eastman Chemical Company
P. O. Box 1994
Kingsport, Tennessee 37662

Contains No CBI

June 24, 1994

(A)

Document Processing Center
Office of Pollution Prevention and Toxics
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460
ATTN: 8(e) Coordinator

Dear Madam or Sir:

Subject: Report submitted in accordance with U.S. Environmental Protection Agency Statement of Interpretation and Enforcement policy; Notification of Substantial Risk-Section 8(e) TSCA.

The following information is submitted in accordance with the above statement. The submission pertains to 2,5-dihydrofuran (CAS Reg No. 1708-29-8) and is being submitted because of preliminary findings observed during a one-week inhalation probe study in the rat which was being conducted for setting exposure concentrations for a four-week subchronic inhalation study.

In the probe study, two male and two female rats per group were exposed to vapor concentrations of 1142, 1686, 3692, or 6889 ppm of 2,5-dihydrofuran for 6 hours per day for up to 5 days. Animals were observed prior to each exposure, during exposure, and after exposure for clinical signs of toxicity.

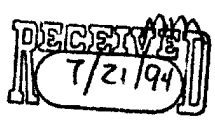
During exposure to 6889 ppm, animals had severely reduced activity. Respiration was shallow and labored. After exposure, animals were weak and prostrate. By the following morning, sialorrhea, abnormal gait, and tremors were seen. This group of animals died prior to the third exposure.

Animals exposed to 3692 ppm had reduced activity during exposure. Tremors were observed during and immediately after the second exposure. These animals also died prior to the third exposure.

Animals exposed to 1686 ppm had reduced activity during exposure, but appeared normal after the first and second exposure days. Prior to the third exposure, three of four animals had convulsions. This group was euthanatized.

Animals in the 1142 group demonstrated reduced activity during exposure on the first four exposure days, but appeared normal during the last exposure. Animals appeared normal after each exposure except for abnormal gait in the two male rats after the third exposure day; this clinical condition was not observed at any other time.

A copy of the final report of the four-week exposure study which will include the results of this probe study will be sent to you.



Malcolm Baldrige National Quality Award 1993 Winner
Eastman Chemical Company

Currently, 2,5-dihydrofuran is an R&D chemical which is expected to be used as a chemical intermediate for the synthesis of industrial chemical(s). None of the material is expected to be present in the product(s). We are not aware of any adverse health effects associated with its synthesis or use to make the product(s) during the R&D operations conducted to date. Employees who have worked with or are currently working with this chemical have been advised of the new findings and precautionary measures which should be used when handling it. Enclosed is a copy of the revised Material Safety Data Sheet for 2,5-dihydrofuran.

If additional information concerning this study is required, please contact the following member of my staff: W. Mills Dyer, Jr., M.D., telephone 615/229-3538.

Sincerely yours,

W. Mills Dyer, Jr.

for Robert C. Joines, Ph.D.
Vice President
Health, Safety and Environment

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Enclosure

MATERIAL SAFETY DATA SHEET

EASTMAN

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| 000002201/F/USA
| Approval Date: 06/24/1994
| Print Date: 06/24/1994
| Page 1

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: 2,5-Dihydrofuran

| Product Identification Number(s): 14504-00

| Manufacturer/Supplier: Eastman Chemical Company, Kingsport, Tennessee 37662

| MSDS Prepared by: Eastman Health, Safety, and Environmental Services, Eastman Chemical Company, Kingsport, TN 37662

| For Emergency Health, Safety & Environmental Information, call 800-EASTMAN

| For Emergency Transportation Information, call CHEMTREC at 800-424-9300 or call 800-EASTMAN

| For Other Information, call your Eastman representative or the Eastman operator at 615-229-2000 (USA)

| Chemical Name: 2,5-dihydrofuran

| Synonym(s): PM 14504-00; EAN 908701

| Molecular Formula: C4H6O

| Molecular Weight: 70.08

| Product Use: research and development sample

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2. COMPOSITION/INFORMATION ON INGREDIENTS

| Weight % - Component - (CAS Registry No.)

| 100 2,5-dihydrofuran (001708-29-8)

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3. HAZARDS IDENTIFICATION

| DANGER!
| EXTREMELY FLAMMABLE LIQUID AND VAPOR - VAPOR MAY CAUSE FLASH FIRE
| HEAT SENSITIVE - CAN DECOMPOSE IF HEATED
| MAY FORM EXPLOSIVE PEROXIDES
| MAY CAUSE NERVOUS SYSTEM DAMAGE BASED ON ANIMAL DATA
| HARMFUL IF INHALED, ABSORBED THROUGH SKIN, OR SWALLOWED
| CAUSES SKIN AND EYE IRRITATION
| THE TOXICOLOGICAL PROPERTIES OF THIS MATERIAL HAVE NOT BEEN FULLY INVESTIGATED

| HMIS Hazard Ratings: Health - 3, Flammability - 4, Chemical Reactivity - 1

7. HANDLING AND STORAGE

Personal Precautionary Measures: Do not breathe vapor. Do not get in eyes and avoid contact with skin and clothing. Use only with adequate ventilation. Wash thoroughly after handling.

Prevention of Fire and Explosion: Keep away from heat, sparks, and flame. Keep from contact with oxidizing materials. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of flammable liquids. Exercise caution in heating, especially in a closed container. Minimize exposure to air. After opening, purge container with nitrogen before reclosing. Periodically test for peroxide formation on long-term storage. Do not allow to evaporate to near dryness. Distill with caution. If peroxide formation is suspected, do not open or move container. Addition of water or appropriate reducing materials will lessen peroxide formation.

Storage: Keep container closed. Store away from heat and light. Use caution when storing or processing material above 59°C (138°F).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits:

ACGIH Threshold Limit Value (TLV): not established

OSHA (USA) Permissible Exposure Limit (PEL, 1989 Table Z-1-A values or section-specific standards): not established

Ventilation: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Use process enclosures, local exhaust ventilation or other engineering controls to maintain airborne levels to an acceptable level.

Respiratory Protection: If engineering controls do not maintain airborne concentrations to an acceptable level, an approved respirator must be worn. Respirator type: organic vapor. If respirators are used, a program should be instituted to assure compliance with OSHA Standard 29 CFR 1910.134.

Eye Protection: Wear safety glasses with side shields (or goggles).

Skin Protection: Wear impervious gloves, boots, and protective clothing appropriate for the risk of exposure.

Recommended Decontamination Facilities: eye bath, washing facilities, safety shower

9. PHYSICAL AND CHEMICAL PROPERTIES

12. ECOLOGICAL INFORMATION

This material has not been tested for environmental effects.

13. DISPOSAL CONSIDERATIONS

Discharge, treatment, or disposal may be subject to national, state, or local laws. Mix with compatible chemical which is less flammable and incinerate.

Since emptied containers retain product residue, follow label warnings even after container is emptied. Residual vapors may explode on ignition; do not cut, drill, grind, or weld on or near this container.

14. TRANSPORT INFORMATION

- DOT (USA) Status: regulated.
- class 3, packing group II
- Proper Shipping Name and Number: Flammable Liquids, n.o.s. (2,5-dihydrofuran), UN 1993

- Air - International Civil Aviation Organization (ICAO)
- ICAO Status: regulated.
- Class 3, packing group II
- Proper Shipping Name and Number: Flammable Liquids, n.o.s. (2,5-dihydrofuran), UN 1993

- Sea - International Maritime Dangerous Goods (IMDG)
- IMDG Status: regulated
- Class 3.2, packing group II
- Proper Shipping Name and Number: Flammable Liquids, n.o.s. (2,5-dihydrofuran), UN 1993

15. REGULATORY INFORMATION

- This document has been prepared in accordance with the MSDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.
- OSHA hazardous chemical(s): 2,5-dihydrofuran

- California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986): material(s) known to the State to cause cancer: none
- California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986): material(s) known to the State to cause adverse reproductive effects: none

- Carcinogenicity Classification (components present at 0.1% or more):

  - International Agency for Research on Cancer (IARC): not listed

- American Conference of Governmental Industrial Hygienists (ACGIH): not listed
- National Toxicology Program (NTP): not listed
- Occupational Safety and Health Administration (OSHA): not listed

- Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372: none

- US Toxic Substances Control Act (TSCA): This product is listed on the TSCA inventory or otherwise complies with TSCA premanufacture notification requirements.

- European Inventory of Existing Commercial Chemical Substances (EINECS): This product is listed on EINECS or has been approved in the European Union by new substance notification.

16. OTHER INFORMATION

Label Statements:

DANGER!
EXTREMELY FLAMMABLE LIQUID AND VAPOR - VAPOR MAY CAUSE FLASH FIRE
HEAT SENSITIVE - CAN DECOMPOSE IF HEATED
MAY FORM EXPLOSIVE PEROXIDES
MAY CAUSE NERVOUS SYSTEM DAMAGE BASED ON ANIMAL DATA
HARMFUL IF INHALED, ABSORBED THROUGH SKIN, OR SWALLOWED
CAUSES SKIN AND EYE IRRITATION
THE TOXICOLOGICAL PROPERTIES OF THIS MATERIAL HAVE NOT BEEN FULLY INVESTIGATED

Keep away from heat, sparks, and flame.
Use caution when storing or processing material above 59°C (138°F).
Store away from heat and light.
Do not allow to evaporate to near dryness.
Exercise caution if heating, especially in a closed container.
Do not breathe vapor.
Do not get in eyes, on skin, on clothing.
Keep container closed.
Use only with adequate ventilation.
Wash thoroughly after handling.

FIRST AID: If inhaled, move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately. In case of contact, immediately flush eyes and skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Destroy contaminated shoes. If swallowed, only induce vomiting as directed by medical personnel. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

IN CASE OF FIRE: Use, water spray, dry chemical, carbon dioxide (CO2), alcohol foam. Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire.

IN CASE OF SPILL: Eliminate all ignition sources. Use water spray to disperse vapors and dilute spill to a nonflammable mixture. Prevent runoff from entering drains, sewers, and streams.

Since emptied containers retain product residue, follow label warnings even after container is emptied. Residual vapors may explode on ignition; do not cut, drill, grind, or weld on or near this container.

FOR RESEARCH AND DEVELOPMENT PURPOSES ONLY BY TRAINED PERSONNEL

The information contained herein is based on current knowledge and experience; no responsibility is accepted that the information is sufficient or correct in all cases. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers and the protection of the environment.