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Submitting Organization

ATOCHEM NORTH AMERICA INC

Contractor

ALLIED CHEM CORP

Document Title

INITIAL SUBMISSION: SKIN CORROSIVITY TEST WITH STANNOUS FLUOROBORATE IN RABBITS WITH COVER LETTER DATED 070892

Chemical Category

STANNOUS FLUOROBORATE



ATO
ATOCHEM
NORTH AMERICA

elf aquitaine

CONTAINS NO CBT

ATOCHEM NORTH AMERICA, INC.
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King of Prussia, PA 19406-0018

Tel: 215-337-6500

92 JUL 14 AM 8:27

8EHO-0792-5579 Init

July 8, 1992



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CERTIFIED MAIL

RETURN RECEIPT REQUESTED

Document Processing Center (TS-790)
Office of Toxic Substances
U.S. Environmental Protection Agency
401 M St., S.W.
Washington, D.C. 20460

Attn: Section 8(e) Coordinator (CAP Agreement)

RE: Report Submitted Pursuant to the TSCA Section 8(e)
Compliance Audit Program

CAP Identification Number: 8ECAP-0026

Dear Sir/Madam:

Pursuant to the Toxic Substances Control Act (TSCA) Section 8(e) Compliance Audit Program and the Agreement for TSCA Section 8(e) Compliance Audit Program (CAP Agreement) executed by Elf Atochem North America Inc. (Atochem) and Environmental Protection Agency (EPA), Atochem is submitting the enclosed final report on a study to assess skin corrosivity in rabbits to the EPA. This study does not involve effects in humans.

Nothing in this letter or the enclosed study is considered confidential business information of Atochem.

The enclosed study provides information on the chemical stannous fluoroborate. Its exact chemical name is tin tetrafluoroborate and its CAS number is 13814-97-6.

The title of the enclosed study report is Skin Corrosivity Test of Stannous Fluoroborate. The following is a summary of the adverse effects observed in this study.

Application of 0.5 ml of stannous fluoroborate solution to the intact skin of a group of six rabbits for 4 hours was corrosive to rabbit skin.

TSCA CAP
Stannous Fluoroborate
July 6, 1992
Page Two

To our knowledge, Atochem has not previously submitted any TSCA Section 8(e) notices or premanufacture notifications on the subject chemical.

Further questions regarding this submission may be directed to me at 215 337-6892.

Sincerely,



C.H. Farr, PhD, DABT
Manager, Product Safety
and Toxicology

Enclosures



Memorandum

TO: M. S. Cortese
B. F. Himmelsbach

DEC 5 1989

FROM: B. J. Dunn
G. M. Rusch

SUBJECT: TRANSMITTAL OF REPORT
FLUOROBORATES
MA-29-78-5

T-317

Skin Corrosivity Test of Stannous Fluoroborate
Report No. MA-29-78-5

CAS Registry Number 13814-97-6

Attached is Department of Toxicology Report No. MA-29-78-5 entitled "Skin Corrosivity Test of Stannous Fluoroborate". Sample No. 8206-45 was assessed for its potential to produce skin corrosivity in adult male New Zealand white rabbits in accordance with the Department of Transportation's method of testing corrosion to skin.

This material caused irreversible damage to the skin of all six rabbits. Based on the results of this test, Stannous Fluoroborate should be considered a corrosive agent on the skin.

BJD.
BJD - 6077

GMR
GMR - 3672

/sg

cc: B. A. Burns
E. W. Callahan
R. L. Feder*
P. L. Foreman*
J. A. Hathaway
T. M. Hillman
D. Levine
W. E. Rinehart
A. C. Smith - Archives
IS Library
File

*Transmittal memo only.

MA-29-78-5

SUMMARY

Stannous fluoroborate solution (Sample No. 8206-48) was assessed for its potential to act as a corrosive agent according to the Department of Transportation (DOT) rabbit skin corrosivity test. The study was terminated at 48 hours post-exposure since severe necrosis of the skin resulting in irreversible damage (determined by the extent of destruction of skin) was observed in all six animals. Stannous fluoroborate should be considered a corrosive agent on the skin based on results of this test.

METHODS

Six outbred male New Zealand albino rabbits were obtained from Summit View Farm, Belvidere, N.J. Each animal was individually identified with a metal ear tag (3 letters and 3 numbers) and quarantined for at least 14 days prior to the start of the study. Each animal was housed separately in suspended stainless steel wire mesh cages with dectized animal cage board (DACB®)^a used as bedding material. The animal rooms were cleaned according to Animal Resources Section SOPs (all applicable SOPs are cited in Appendix B). An ambient temperature of $20 \pm 4^{\circ}\text{C}$, humidity of $50 \pm 5\%$ and a photoperiod of 12 hours light and 12 hours darkness were maintained. A diet of Purina Rabbit Chow 5321 from W.F. Fisher & Son and water from an automatic system were provided ad libitum, except during application of test material and during observations.

The rabbits were closely clipped over the back and sides with a Model A5 Oster small animal clipper^b one day before dosing. A size No. 10 blade was used to remove the long hair and then a size No. 40 blade was used to remove the remaining hair. 0.5 mL of stannous fluoroborate solution was introduced under a 12 ply surgical gauze patch, 1 inch by 1 inch. Each rabbit received two patches applied to intact (nonabraded) skin. One patch covered the test site (stannous fluoroborate) and the second patch served as an untreated negative control. The patches were held in place by securing all four edges with Blenderm® surgical tape.^c The entire trunk of each animal was wrapped with an impervious material, "Saran Wrap",^d for a four-hour period of exposure. The "Saran Wrap" was held in place with athletic adhesive tape. A Say-T-Shield^e collar was placed around the neck of each test animal for the four-hour exposure period. The collars were utilized to prevent removal of wrappings and patches while allowing the animals food and water ad libitum.

a Shepherd Specialty Papers, Kalamazoo, MI

b Oster Corporation, Milwaukee, WI

c 3M Company, Medical Products Division, St. Paul, MN

d The Dow Chemical Company, Indianapolis, IN

e EJAY International, Glendale, CA

MA-29-78-5

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Observations

After four hours of exposure, the patches were removed and the resulting reactions were evaluated. Readings were again made at the end of a total of 48 hours (44 hours after the first reading).

Corrosion would be considered to have resulted if the stannous fluoroborate solution caused destruction or irreversible alteration of the skin. Ulceration or necrosis of the tissue at 48 hours post-exposure would be considered permanent tissue damage (i.e., tissue destruction does not include merely sloughing of the superficial epidermis, or erythema, edema or fissuring).(1)

In addition, the Draize technique (2) for evaluation of skin reactions was used to score the responses at 4 and 48 hours after dosing (Table 1).