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IR# 320963

August 10, 2009

TSCA Confidential Business Information Center (7407M)
EPA East-Room 6428 Attn: Section 8(e)
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460-0001

8EHQ-0809-17608A

Dear Sir/Madam:

The purpose of this letter is to inform you under Section 8(e) of TSCA of the results obtained from the recent three aquatic toxicity studies on EPOMIN SP-200, the chemical being produced by my client, Nippon Shokubai Co., Ltd. The reports are entitled "Acute Toxicity Test of EPOMIN SP-200 with Medaka (*Oryzias latipes*)", "Acute Immobilisation Test of EPOMIN SP-200 with *Daphnia magna*", and "Growth Inhibition Test of EPOMIN SP-200 with *Pseudokirchneriella subcapitata*". EPOMIN SP-200, a commercial chemical product has been manufactured in Japan by Nippon Shokubai Co., Ltd., and imported to the US by my client, NA Industries Inc. , P.O. Box 5407 Chattanooga, TN 37406. EPOMIN SP-200's CAS name and number are Aziridine homopolymer and 9002-98-6, respectively.

Enclosed please find the copy of the reports and its TSCA Health & Safety Study Cover Sheet.

If you have any questions or comments on this submission, please feel free to call me at (703)920-5440 or email me at hiyama@ix.netcom.com.

Sincerely yours,

Hiroshi Uyama

DCN:(88090000332)

Contains No CBI

CONTAINS NO CBI

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

TSCA CBI STATUS: **OMB Control # 2070-0156**

☐ **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.

RECEIVED
09 AUG 11 PM 2:23

1.0 SUBMISSION TYPE ☐ *Contains CBI*

☐ 8(d) ☒ 8(e) ☐ FYI ☐ 4 ☐ OTHER: Specify _____

☒ Initial Submission ☐ Follow-up Submission ☒ Final Report Submission

Previous EPA Submission Number or Title if update or follow-up: Docket Number, if any: #

ITC Submission ☐ Yes ☐ No

☐ continuation sheet attached

2.1 SUMMARY/ABSTRACT ATTACHED (may be required for 8(e): optional for §4, 8(d) & FYI) ☐ YES ☒ NO	**2.2 SUBMITTER TRACKING NUMBER OR INTERNAL ID**	**2.3 FOR EPA USE ONLY**	**2.4 Study ___ of ___**

3.0 CHEMICAL/TEST SUBSTANCE IDENTITY ☐ *Contains CBI*

Reported Chemical Name (specify nomenclature if other than CAS name):

CAS# 9002-98-6

Purity _____%

☒ Single Ingredient

☐ Commercial/Tech Grade

☐ Mixture

Aziridine homopolymer

Trade Name: EPOMIN SP-200 *Common Name:* Polyethyleneimine

CAS Number	*NAME*	*% WEIGHT*
Other chemical(s) present in tested mixture		

☐ continuation sheet attached

4.0 REPORT/STUDY TITLE ☐ *Contains CBI*

Acute Immobilisation Test of EPOMIN SP-200 with Daphnia magna

☐ continuation sheet attached

5.1 STUDY/TSCATS INDEXING TERMS

[CHECK ONE]

HEALTH EFFECTS (HE): _____ ENVIRONMENTAL EFFECTS (EE): ✓ ENVIRONMENTAL FATE (EF): _____

5.2 STUDY/TSCATS INDEXING TERMS (see instructions for 4 digit codes)

STUDY TYPE: ATOX	SUBJECT ORGANISM (HE, EE only): Arthropod	ROUTE OF EXPOSURE (HE only): _____	VEHICLE OF EXPOSURE (HE only) _____
Other:	*Other:*	*Other:*	*Other:*

6.0 REPORT/STUDY INFORMATION ☐ *Contains CBI* ☐ Study is GLP

Laboratory Mitsubishi Chemical Medience Corporation

Report/Study Date 6/30/09

Source of Data/Study Sponsor (if different than submitter) _____ Number of pages 3

☐ continuation sheet attached

7.0 SUBMITTER INFORMATION ☐ *Contains CBI*

Submitter: Takeshi Tomita Title: Manager Phone: 423629-6496

Company Name: NA Industries Inc Company Address: P.O Box 5407 Chattanooga TN 37406

Submitter Address (if different): _____

Technical Contact: Hiroshi Uyama, Japan Technical Information Center Phone: (703)920-5440

☐ continuation sheet attached e-mail address

8.0 ADDITIONAL COMMENTS ☐ *Contains CBI*

☐ continuation sheet attached **Submitter Signature:** Hiroshi Uyama **Date:** 8/10/09

EPA Form No. _____

Page ___ of ___

Use of this form is voluntary, but recommended by EPA as a cover sheet for TSCA section 4, 8(d), and 8(e) submssions to expedite and improve the management, processing, quality, review, and public availability of data in TSCATS.

FINAL REPORT
(English version)
Acute Immobilisation Test of EPOMIN SP-200 with *Daphnia magna*

(Report No. A090105)

June 30, 2009
Yokohama Research center
Toxicological Science Division
Medi-chem Business Segment
Mitsubishi Chemical Medience Corporation.
1000 Kamoshida-cho, Aoba-ku, Yokohama,
Kanagawa, Japan

Study Director: Midori MINO, B.Sc.

Sponsor
NIPPON SHOKUBAI CO., LTD.

Purpose
In order to clarify the effects of the test substance, *Daphnia magna* was exposed to the test solution containing the test substance for 48-hour.

Test Guidelines
OECD Guideline for Testing of Chemicals 202 (2004) "*Daphnia* sp., Acute Immobilisation Test"

Testing Date
Exposure: May 12, 2009– May 14, 2009

Test Methods

1) Test substance:	EPOMIN SP-200 (Lot No.: 9C06K1)
2) Exposure procedure:	static
3) Test species:	female juvenile of *Daphnia magna* (less than 24 hours old)
4) Duration:	48 hours
5) Test concentrations:	control, 1.0, 10, 100 mg/L
6) Dilution water:	Elendt M4, reconstituted water recommended in the guideline
7) Volume of test solution:	100 mL/vessel
8) Number of vessels:	4 vessels/test group
9) Number of test species:	20 daphnids / test group (5 daphnids /vessel)
10) Temperature:	20 ± 1°C
11) Dissolved oxygen concentration:	≧ 3 mg/L, not aerated
12) pH:	not adjusted
13) Light:	fluorescent light, 16 hours light (800 lux or less) /8 hours dark
14) Feeding:	none

Test procedure

To prepare the test solution of the 100 mg/L group, the test substance was added to the dilution water and mixed by repeated inversion. The 1.0 and 10 mg/L groups were prepared by dilution of the 100 mg/L group. The control group was prepared with only dilution water.

After measurements of the temperature, dissolved oxygen concentration (DO) and pH of the test solutions, daphnids were introduced into each test vessel. The temperatures, DO and pH of the test solutions were also measured at the end of exposure. The number of immobile daphnids* was recorded at 24 and 48 hours after the exposure.

*: Those animals that were not able to swim within 15 seconds, after gentle agitation of the test vessels were considered to be immobile.

Results

The qualities of the test solutions are shown in Table 1, and appearances of the test solutions are shown in Table 2. Temperature and DO of test solutions were within proper range for daphnids, and these values were fulfilled the conditions for validity of the test.

The pH values of control, 1.0 and 10 mg/L groups were within proper range (6.0–8.5) for daphnids, but the 100 mg/L group was out of proper range. The appearance of the test solutions was colorless in all test groups.

The number of the cumulative immobility for each exposure period is shown in Table 3. The immobility in the control was 0%, and also the rate of daphnid floating on the water surface in the control group was 0% during exposure.

The immobility in the 1.0, 10 and 100 mg/L groups were 0, 5 and 100%, respectively. Therefore, the median effect concentration after 48-hour exposure could be determined 10 mg/L < (48hr-EC50) < 100 mg/L.

Table 1 Temperature, pH and Dissolved Oxygen Concentration in Test Solutions

Nominal Concentration (mg/L)	Temperature (°C)		D.O. (mg/L)		pH	
	0 Hour	48 Hours	0 Hour	48 Hours	0 Hour	48 Hours
Control	20.1	20.1	8.8	8.5	8.3	8.0
1.0	20.1	20.1	8.8	8.6	8.4	8.1
10	20.1	20.1	8.8	8.7	8.7	8.2
100	20.1	20.1	8.7	8.5	9.3	8.7

Table 2 Appearance of Test Solutions

Nominal Concentration (mg/L)	Appearance of Test Solutions	
	0 Hour	48 Hours
Control	C-	C-
1.0	C-	C-
10	C-	C-
100	C-	C-

Color:

C- : colorless

Table 3 The Number of Immobilized *Daphnia magna* (Percent Immobility)

Nominal Concentration (mg/L)	Cumulative Number of Immobilized *Daphnia* (Percent Immobility)	
	24 Hours	48 Hours
Control	0 (0)	0 (0)
1.0	0 (0)	0 (0)
10	0 (0)	1 (5)
100	14 (70)	20 (100)