

elf atochem

ATO

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8EHQ-0993-12429

Contains No CB

September 13, 1993

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**FEDERAL EXPRESS
RETURN RECEIPT REQUESTED**



8EHQ-93-12429
INIT 09/17/93

Document Processing Center (TS-790)
Office of Toxic Substances
Environmental Protection Agency
401 M St. S.W.
Washington, D.C. 20460
Attn: Section 8(e) Coordinator



88930000446

Subject: TSCA Section 8(e) Submission

09 SEP 17 AM 11:55

Dear Sir/Madam:

Elf Atochem North America Inc. is submitting the attached study to the Environmental Protection Agency (EPA) pursuant to Toxic Substances Control Act (TSCA) Section 8(e). This study does not involve effects in humans.

The enclosed study recently came into our possession via our parent company in France and provides information on MADQUAT 80 MC. MADQUAT 80 MC is methacryloxyethyltrimethyl ammonium chloride (CAS No. 5039-78-1). This product is manufactured by Elf Atochem for use as a monomer in polymer synthesis.

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

The title of the enclosed study report is Magnusson & Kligman Maximization Test in the Guinea Pig. The following is a summary of the adverse effects observed in the Magnusson & Kligman Maximization test.

MADQUAT 80 MC was tested for potential to produce allergic skin reaction by intradermal injection and skin application to guinea pigs using a modified Magnusson and Klingman method. The test material produced a 100% (20/20) sensitization rate and was classified as a strong sensitizer.

RECEIVED
10-1-93

TSCA 8(e) Submission
MADQUAT 80 MC
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Page 2

Elf Atochem has not previously filed any 8(e) notices or Premanufacture Notifications (PMNs) on the subject material.

Results from the study report are being included in the current Elf Atochem Material Safety Data Sheet for MADQUAT 80 MC.

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

Enclosure

QUALITY ASSURANCE UNIT
SAFEPHARM LABORATORIES LIMITED

STATEMENT OF COMPLIANCE

This study was carried out in compliance with
OECD Principles of Good Laboratory Practice.

The routine inspection of short term toxicity studies
at Safepharm Laboratories is carried out as a continuous
process designed to ensure that where possible all critical
phases of a particular study type are inspected at least
once per month.

This report has been audited by Safepharm Laboratories
Quality Assurance Unit and is an accurate account of the
procedures followed and accurately records the original raw
laboratory data generated in this study.

M.B. Thomas B.Sc., M.I. Biol.
QUALITY ASSURANCE MANAGER


.....

DATE:

11/7/85
.....

CONFIDENTIAL

MADQUAT 80 MC = methacryloxyethyl trimethyl
ammonium chloride

MADQUAT 80 MC:

1. RANGE FINDING ACUTE ORAL TOXICITY TEST IN THE RAT.
2. OECD ACUTE DERMAL IRRITATION/CORROSION TEST IN THE RABBIT.
3. OECD ACUTE EYE IRRITATION/CORROSION TEST IN THE RABBIT.
4. MAGNUSSON & KLIGMAN MAXIMIZATION TEST IN THE GUINEA PIG.

Authors: T.A. Collier
R.L. Guest
D.S. Hewitt

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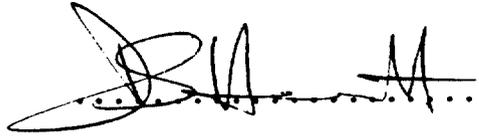
Telephone: DERBY (0332) 792896/
792789

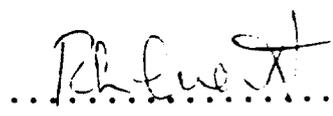
Telex: 377079 SAFPHM G

V A L I D A T I O N

We the undersigned hereby declare that this study was performed under our supervision according to the procedures herein described, and that this report provides an accurate and faithful record of the results obtained.

Study Supervisors:

 Date: 10.7.85
D.S. Hewitt B.Sc. (Hons)

 Date: 11/7/85
R.L. Guest HTEC

Study Director:

 Date: 11/7/85
T.A. Collier HNC

6

MAGNUSSON & KLIGMAN MAXIMIZATION STUDY:
DETERMINATION OF THE CONTACT SENSITIZATION
POTENTIAL OF MADQUAT 80 MC
IN THE GUINEA PIG
EXPERIMENT NUMBER 85/8505

Experimental Procedures:

Date Started: 03.05.85

Date Completed: 02.06.85

MAGNUSSON & KLIGMAN MAXIMIZATION STUDY:
DETERMINATION OF THE CONTACT SENSITIZATION
POTENTIAL OF MADQUAT 80 MC IN THE GUINEA PIG
EXPERIMENT NUMBER 85/8505

INTRODUCTION

This study was performed according to Safepharm Standard Protocol Number GM 09/83/85B "The Magnusson & Kligman Maximization Test" and was designed to assess the contact sensitization potential of the test material. The results of the study will be of value in predicting the contact sensitization potential of the test material to man.

The test system was chosen because the guinea pig has been shown to be a suitable model for this type of study and is recommended in the test method.

METHODS

1. Animals and Animal Husbandry

Forty-six female, albino Dunkin-Hartley guinea pigs supplied by A. Tuck & Sons Limited, Battlesbridge, Essex, in the weight range 382-494g and approximately 8 to 12 weeks of age at the start of the study, were used. This strain of guinea pig has been shown to produce a satisfactory sensitization rate using known positive sensitizers; the sensitivity of these animals is checked at regular intervals at this laboratory.

All the guinea pigs were acclimatised to the laboratory environment for a minimum period of five days prior to the start of the study.

The guinea pigs were allocated at random to cages within treatment groups. They were housed in groups of up to four in solid-floor polypropylene cages (supplied by NKP Limited, Dartford, Kent) and furnished with softwood shavings. A standard laboratory guinea pig diet (Guinea Pig FD1 Diet

Special Diet Services Limited, Witham, Essex) and

METHODS/Contd

1. Animals and Animal Husbandry (contd)

The animal room temperature was maintained at $22 \pm 3^{\circ}\text{C}$ recorded daily on a maximum and minimum thermometer. The rate of air exchange was approximately 10 changes per hour and lighting was controlled by means of a time switch to give a 12 hour light/dark cycle. Humidity remained within a range of 45-65 %RH recorded daily on a wet and dry bulb hygrometer.

Each animal was uniquely identified for this study by experimental cage label and indelible ink marks on the rump.

2. Test Material and Experimental Preparation

Clear colourless liquid MADQUAT 80 MC supplied by Norsolor SA in a plastic screw-top container was received at these laboratories on 29 April 1985. The test material was stored at ambient temperature in the dark.

For the purpose of this study the following concentrations of the test material were freshly prepared as required:-

Intradermal Induction	:	5% in water for injection B.P.
Topical Induction	:	100% as supplied.
Topical Challenge	:	100% as supplied.

The identification and stability of the test material and its preparations were not determined.

METHODS/Contd

3. Procedures

The test method is based on that originally described by Magnusson B. and Kligman A.M., J. Invest. Derm. 1969, 52, 268-276 with modifications as indicated in the U.K. Health and Safety Commission publication "Approved Code of Practice: Methods for determination of toxicity" to comply with the Notification of New Substances Regulations 1982.

Before commencing the Main Study a preliminary screen was carried out on the test material in order to determine its primary cutaneous irritation and systemic toxicity properties following both topical application and intradermal injection.

i) Procedures for Preliminary Siting Test

a) Intradermal Injection

An area measuring 4cm x 6cm in the shoulder region of each of two guinea pigs was clipped free of hair using Oster A5 electric animal clippers (Oster Inc, Wisconsin, USA). Into the clipped area of one of these animals four 0.1ml intradermal injections of the test material at a concentration of 1% in a suitable vehicle were administered simultaneously; similarly four 0.1ml aliquots of a 5% concentration of the test material were injected into the second guinea pig.

Animals were observed 24, 48 and 72 hours and 7 days following treatment and any evidence of localized necrosis or systemic toxicity was recorded.

Using the information obtained from this preliminary test, a concentration of the test material which was well

METHODS/Contd

3. Procedures (contd)

i) Procedures for Preliminary Siting Test (contd)

a) Intradermal Injection (contd)

tolerated both locally and systemically (ie usually 1% or 5%) was selected for the Intradermal Induction stage of the Main Study.

b) Topical Application

Both flanks of each of two guinea pigs were closely clipped free of hair using Oster A5 electric animal clippers. These animals had been intradermally injected with Freund's complete adjuvant (Difco Laboratories, Detroit, Michigan, USA) between one and three weeks previously. The test material at a number of different concentrations in a suitable vehicle was applied to the clipped flanks under occlusive patches; the test material preparation was applied to a 2cm x 2cm square of Whatman No 4 filter paper and placed into position on the skin. The patch was secured with two strips of Slek waterproof adhesive strapping (Smith & Nephew Limited) in the form of a cross. Up to four patches were applied to each guinea pig. The loaded patches were covered with an overlapping length of aluminium foil. Both patches and foil were then firmly secured by a 7.5cm x 25cm length of Elastoplast elastic adhesive bandage (Smith & Nephew Limited) wound in a double layer around the torso of the animal. The patches were left in position for 24 hours.

Following the 24 hour exposure period the dressings and patches were removed and any residual test material

METHODS/Contd

3. Procedures (contd)

i) Procedures for Preliminary Siting Test (contd)

b) Topical Application (contd)

was washed from the application sites using cotton wool soaked in lukewarm water or ether. Approximately one hour following removal of the patches and 24 and 48 hours later, the reactions at the application sites were evaluated and scored according to the following scheme:-

No reaction	0
Scattered mild redness	1
Moderate and diffuse redness	2
Intense redness and swelling	3

The concentrations of the test material to be used on a further two guinea pigs were chosen, applied and then evaluated after similar time intervals.

Using the irritancy data obtained from all four animals used in the siting test the maximum concentration of the test material that was well tolerated was chosen for the Topical Induction stage of the Main Study. In addition the maximum non-irritant concentration of the test material ie that which caused no reactions at the 24 or 48 hour readings in any of the siting test animals, was chosen for the Topical Challenge stage of the Main Study.

ii) Procedure for Main Study

a) Induction

DAY 0: EXPERIMENTAL GROUP. An area measuring 4cm x 6cm in the shoulder region of each of 20 guinea pigs

METHODS/Contd

3. Procedures (contd)

ii) Procedure for Main Study (contd)

a) Induction (contd)

Day 0: EXPERIMENTAL GROUP. (contd)

was closely clipped free of hair. Into this area three pairs of intradermal injections were given simultaneously as follows:-

(1)	(1)
(2)	(2)
(3)	(3)

- (1) 0.1ml of Freund's complete adjuvant (Difco Laboratories, Detroit, Michigan USA).
- (2) 0.1ml of a 5 % concentration of the test material.
- (3) 0.1ml of a 50:50 mixture of a 5 % concentration of the test material emulsified in the adjuvant.

DAY 0: CONTROL GROUP. A further group of 20 guinea pigs was treated in a similar manner to the Experimental Group except that they were not exposed to the test material but received three pairs of intradermal injections as follows:-

- (1) 0.1ml of Freund's complete adjuvant
- (2) 0.1ml of vehicle alone
- (3) 0.1ml of a 50:50 mixture of vehicle emulsified in Freund's complete adjuvant

DAY 7: EXPERIMENTAL GROUP. The same area in the shoulder region of each guinea pig used

METHODS/Contd

3. Procedures (contd)

ii) Procedure for Main Study (contd)

a) Induction (contd)

DAY 7: EXPERIMENTAL GROUP. (contd)

previously for intradermal inductions was again closely clipped free of hair. The test material at a concentration of 100% was applied to a 2cm x 4cm patch of Whatman No 4 filter paper. This patch was applied to the clipped shoulder region and held in position with two strips of Slek waterproof adhesive strapping in the form of a cross. The patch was further secured by a 3.5cm x 25cm length of Elastoplast elastic adhesive bandage which was wound in a double layer around the torso of the animal. The dressing and patches were removed following a 48 hour exposure period.

DAY 7: CONTROL GROUP. The control group guinea pigs were treated in an identical manner to the Experimental Group animals except that the vehicle alone was applied to the induction site.

b) Challenge

DAY 21: EXPERIMENTAL AND CONTROL GROUPS. An area measuring 5cm x 5cm on both flanks of each Experimental and Control Group guinea pig was closely clipped free of hair. The test material, at the highest non-irritant concentration indicated by the topical siting test (100%) was applied to

METHODS/Contd

3. Procedures (contd)

ii) Procedure for Main Study (contd)

b) Challenge (contd)

DAY 21: EXPERIMENTAL AND CONTROL GROUPS. (contd)

the clipped right flank of each animal under an occlusive patch in a similar manner to that used in the topical siting test. The vehicle alone was similarly applied to the clipped left flank. Both patches were covered with an overlapping length of aluminium foil and then held firmly in position for 24 hours by means of a 7.5cm x 25cm length of Elastoplast elastic adhesive bandage wound in a double layer around the torso of the animal.

DAY 22: Following the 24 hour exposure period the dressings and patches were removed from all Experimental and Control Group guinea pigs and any residual test material or vehicle was washed from the challenge sites using cotton wool soaked in lukewarm water or ether. The sites were marked using an indelible pen.

DAY 23: Twenty-one hours following removal of the patches the challenge sites of all Experimental and Control Group guinea pigs were lightly clipped free of hair. Three hours later (ie 24 hours following removal of the patches) the reactions observed at the test material and vehicle control sites were evaluated and scored using the same scheme used in the topical application siting

METHODS/Contd

3. Procedure (contd)

ii) Procedure for Main Study (contd)

b) Challenge (contd)

DAY 24: The reactions observed at the challenge sites were again observed and scored i.e. 48 hours following removal of the patches.

c) Interpretation of Results

The number of guinea pigs in the Experimental Group showing a more severe reaction at the test material challenge site, than the most severe reaction observed at the test material challenge site of any of the Control Group animals, was noted. These reactions in the Experimental Group were attributed to contact sensitization caused by the test material. The test material was assigned a sensitization classification based on the percentage of animals showing a positive reaction according to the following modification of a scheme originally designed by Magnusson:-

Percentage of animals sensitized	Classification of sensitization potential
0	Non-sensitizer
1 - 28	Mild sensitizer
29 - 65	Moderate sensitizer
66 - 100	Strong sensitizer

METHODS/Contd

3. Procedure (contd)

ii) Procedure for Main Study (contd)

The results of this study provides an assessment of whether or not a test material could be a likely sensitizer. Extrapolation of these results to man is valid only to a very limited degree. The only generalisation that can be made is that test materials which are strong sensitizers in guinea pigs also cause a substantial number of sensitization reactions in man, whereas mild sensitizers in guinea pigs may or may not cause reactions in man.

ARCHIVES

On completion of the study all raw laboratory data and a copy of the final report were transferred to Safepharm Laboratories Central Archives, London Road, Shardlow, Derbyshire, England.

RESULTS

1. Intradermal Injection Siting Test

A summary of the results is given in Table 1 below:-

TABLE 1 : SUMMARY OF RESULTS FOR INTRADERMAL INJECTION
SITING TEST

Guinea Pig Number	Time of observation	Concentration of test material*	Evidence of necrosis	Evidence of systemic toxicity
A	24 hour	1%	None	None
	48 hour		None	None
	72 hour		None	None
	7 days		None	None
B	24 hour	5%	None	None
	48 hour		None	None
	72 hour		None	None
	7 days		None	None

* Vehicle: water for injection B.P.

Using the information given in Table 1 the concentration of the test material to be used for the intradermal induction stage of the Main Study was selected as follows:-

Intradermal Induction: 5% in water for injection B.P.

RESULTS/Contd

2. Topical Siting Test

An evaluation of the reactions observed at the application sites is given in Table 2 below:-

TABLE 2 : TOPICAL SITING TEST - EVALUATION OF REACTIONS
OBSERVED AT APPLICATION SITES

Guinea Pig Number	Concentration of test Material*%	Evaluation of Application Sites after Removal of Patches		
		1 hour	24 hours	48 hours
C	50	0	0	0
	100	0	0	0
D	50	0	0	0
	100	0	0	0
E	50	0	0	0
	100	0	0	0
F	50	0	0	0
	100	0	0	0

* Vehicle: water for injection B.P.

Using the information given in Table 2 the concentrations of the test material to be used in the Main Study were selected as follows:-

Topical Induction: 100% as supplied

Topical Challenge: 100% as supplied

RESULTS/Contd

3. Main Study

An evaluation of the challenge sites in the Experimental and Control Group guinea pigs is given in Table 3.

TABLE 3 : MAIN STUDY - EVALUATION OF REACTIONS AT CHALLENGE SITE IN THE EXPERIMENTAL AND CONTROL GROUPS

Test material : MADQUAT 80 MC

Challenge Concentration : 100%

Vehicle : - *

EXPERIMENTAL GUINEA PIG NUMBER	EXPERIMENTAL GROUP SCORES				CONTROL GUINEA PIG NUMBER	CONTROL GROUP SCORES			
	24 hours		48 hours			24 hours		48 hours	
	Test	Vehicle	Test	Vehicle	Test	Vehicle	Test	Vehicle	
1-0	1	0	1	0	6-0	0	0	0	0
1-1	1	0	1	0	6-1	0	0	0	0
1-2	1	0	1	0	6-2	0	0	0	0
1-3	+1	0	+1	0	6-3	0	0	0	0
2-0	2	0	1	0	7-0	0	0	0	0
2-1	2	0	2	0	7-1	0	0	0	0
2-2	1	0	2	0	7-2	0	0	0	0
2-3	1	0	1	0	7-3	0	0	0	0
3-0	2	0	1	0	8-0	0	0	0	0
3-1	1	0	1	0	8-1	0	0	0	0
3-2	1	0	1	0	8-2	0	0	0	0
3-3	+2	0	+2	0	8-3	0	0	0	0
4-0	2	0	1	0	9-0	0	0	0	0
4-1	2	0	2	0	9-1	0	0	0	0
4-2	+2	0	+2	0	9-2	0	0	0	0
4-3	2	0	2	0	9-3	0	0	0	0
5-0	+1	0	+1	0	10-0	0	0	0	0
5-1	2	0	2	0	10-1	0	0	0	0
5-2	1	0	1	0	10-2	0	0	0	0
5-3	1	0	1	0	10-3	0	0	0	0

+ = Reactions extending beyond application sites.

RESULTS/Contd

3. Main Study (contd)

As indicated in Table 3 20/20 guinea pigs in the Experimental Group showed scattered mild redness (score 1) or moderate and diffuse redness (score 2) at the test material challenge site at the 24 and 48 hour readings. As no reactions were observed at the test material challenge site of any of the Control Group animals, the effects seen in the Experimental Group were attributed to contact sensitization caused by the test material.

The test material therefore produced a 100% (20/20) sensitization rate and was classified as a STRONG SENSITIZER.

Bodyweights

Individual bodyweights at Day 0 and Day 24, together with percentage bodyweight gains are given in the Appendix.

Bodyweight gains of guinea pigs in the Experimental Group between Day 0 and Day 24 were comparable to those observed in the Control Group over the same period.

CONCLUSION

The test material, MADQUAT 80 MC was found to be a strong sensitizer in the guinea pig.

A P P E N D I X

INDIVIDUAL BODYWEIGHTS AND PERCENTAGE

BODYWEIGHT GAINS OF EXPERIMENTAL AND

CONTROL GROUP GUINEA PIGS

APPENDIX

INDIVIDUAL BODYWEIGHTS OF EXPERIMENTAL AND CONTROL GROUP GUINEA PIGS

AT DAY 0 AND DAY 24

TEST MATERIAL: MADQUAT 80 MC

GUINEA PIG NO.	EXPERIMENTAL GROUP			GUINEA PIG NO.	CONTROL GROUP		
	BODYWEIGHT DAY 0	BODYWEIGHT DAY 24	% BODYWEIGHT INCREASE		BODYWEIGHT DAY 0	BODYWEIGHT DAY 24	% BODYWEIGHT INCREASE
1-0	417	448	7	6-0	421	541	29
1-1	444	553	25	6-1	421	517	23
1-2	413	397	-4	6-2	399	501	26
1-3	433	542	25	6-3	422	514	22
2-0	469	583	24	7-0	389	452	16
2-1	480	511	6	7-1	421	525	25
2-2	398	487	22	7-2	448	528	18
2-3	432	514	19	7-3	442	517	17
3-0	438	542	24	8-0	413	515	25
3-1	409	496	21	8-1	457	569	25
3-2	382	477	25	8-2	397	512	29
3-3	417	574	38	8-3	430	513	19
4-0	389	488	25	9-0	398	491	23
4-1	438	507	16	9-1	417	450	8
4-2	459	585	27	9-2	421	410	-3
4-3	486	538	11	9-3	405	476	18
5-0	400	517	29	10-0	492	664	35
5-1	390	469	20	10-1	414	536	29
5-2	420	517	23	10-2	494	678	37
5-3	389	449	15	10-3	490	604	23



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

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900 First Avenue, P.O. Box 1536
King of Prussia, Pennsylvania 19406-0018

OFFICE OF
PESTICIDES AND TOXIC
SUBSTANCES

JAN 18 1994

This letter formally acknowledges EPA's receipt of information submitted by your organization under Section 8(e), the "substantial risk" information reporting provision of the Toxic Substances Control Act (TSCA). For your reference, copies of the first page(s) of your submission(s) are enclosed and display the TSCA Section 8(e) Document Control Number (i.e., 8EHQ-0000-0000 Init.) assigned by EPA to your submission(s). Please refer to this cited number when submitting follow-up or supplemental information.

Please note that all submitted correspondence will be placed in the public files unless confidentiality is claimed according to the procedures outlined in Part X of EPA's TSCA Section 8(e) policy statement (43 FR 11110, March 16, 1978).

Confidential submissions submitted pursuant to the TSCA Section 8(e) Compliance Audit Program (CAP) should already contain information supporting confidentiality claims, because substantiation of CBI claims is required at the same time the 8(e) CAP is submitted to EPA. (If not done so already, please ensure that this information is provided to the Agency). When substantiating any/all claims, answer the questions detailed in the following attachment.

For NON-CAP submissions, any confidentiality claims should be supported by submission of information as described in the attachment(s).

12429 A



BEST COPY AVAILABLE

ICATS DATA:
Submission # BEHQ 0993-12429 SEQ A

TYPE (INT) SUPP FLW
SUBMITTER NAME: Attochem North America, Inc.

INFORMATION REQUESTED: FLWP DATE:
 0501 NO INFO REQUESTED
 0502 INFO REQUESTED (TECH)
 0503 INFO REQUESTED (VOL ACTIONS)
 0504 INFO REQUESTED (REPORTING RATIONALE)
 DISPOSITION:
 REFER TO CHEMICAL SCREENING
 0678 CAP NOTICE

VOLUNTARY ACTIONS:
 NO ACTION REPORTED
 0402 STUDIES PLANNED/UNDERWAY
 0403 NOTIFICATION OF WORKER/OUTSIDE
 LABEL/MSDS CHANGES
 0405 PROCESS/HANDLING CHANGES
 0406 APP USE DISCONTINUED
 0407 PRODUCTION DISCONTINUED
 0408 CONFIDENTIAL

UJH DATE: 09/13/93 OTS DATE: 09/17/93 CERAD DATE: 10/01/93

CHEMICAL NAME: MADQUAT 80 MC CASE: 5039-78-1

INFORMATION TYPE:	P F C	INFORMATION TYPE:	P F C	INFORMATION TYPE:	P F C
201 ONCO (HUMAN)	01 02 04	0216 EPI/CLIN	01 02 04	0241 IMMUNO (ANIMAL)	01 02 04
202 ONCO (ANIMAL)	01 02 04	0217 HUMAN EXPOS (PROD CONTAM)	01 02 04	0242 IMMUNO (HUMAN)	01 02 04
203 CELL TRANS (IN VITRO)	01 02 04	0218 HUMAN EXPOS (ACCIDENTAL)	01 02 04	<input checked="" type="checkbox"/> 0243 CHEMPHYS PROP	01 02 04
204 MUTA (IN VITRO)	01 02 04	0219 HUMAN EXPOS (MONITORING)	01 02 04	0244 CLASTO (IN VITRO)	01 02 04
205 MUTA (IN VIVO)	01 02 04	0220 BIOAQUA TOX	01 02 04	0245 CLASTO (ANIMAL)	01 02 04
206 REPRO/TERATO (HUMAN)	01 02 04	0221 ENV. OCCUR/FATE	01 02 04	0246 CLASTO (HUMAN)	01 02 04
207 REPRO/TERATO (ANIMAL)	01 02 04	0222 EMER INCI OF ENV CONTAM	01 02 04	<input checked="" type="checkbox"/> 0247 DNA DAM/REPAIR	01 02 04
208 NEURO (HUMAN)	01 02 04	0223 RESPONSE REQ/ST DELAY	01 02 04	<input checked="" type="checkbox"/> 0248 PRODUSE/PROC	01 02 04
209 NEURO (ANIMAL)	01 02 04	<input checked="" type="checkbox"/> 0224 PROD/COMP/CHEM ID	01 02 04	0249 MSDS	01 02 04
210 ACUTE TOX (HUMAN)	01 02 04	0225 REPORTING RATIONALE	01 02 04	0299 OTHER	01 02 04
211 CHR. TOX (HUMAN)	01 02 04	0226 CONFIDENTIAL	01 02 04		
212 ACUTE TOX (ANIMAL)	01 02 04	0227 ALLERG (HUMAN)	01 02 04		
213 SUB ACUTE TOX (ANIMAL)	01 02 04	<input checked="" type="checkbox"/> 0228 ALLERG (ANIMAL)	01 02 04		
214 SUB CHRONIC TOX (ANIMAL)	01 02 04	0239 METAB/PHARMACO (ANIMAL)	01 02 04		
215 CHRONIC TOX (ANIMAL)	01 02 04	0240 METAB/PHARMACO (HUMAN)	01 02 04		

TRIAGE DATA: NON-CM INVENTORY ONGOING REVIEW SPECIES TOXICOLOGICAL CONCERN: USE: PRODUCTION:
 YES (CONTINUE) YES (DROP/REFER.) GP LOW Monomer in polymer synthesis
 NO (DROP) NO (CONTINUE) MED
 DETERMINE REFER: HIGH skin sensitization

COMMENTS: Non-Cap
 Skin sensitization in guinea pigs is high because the test material is a strong sensitizer. During the Magnusson + Kligman Maximization Test (modified) 20/20 (100%) of the guinea pigs exhibited evidence of sensitization 24 + 48 hours after challenge application.