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TX-000275



Biochemical Research Laboratory

The Dow Chemical Company

BC T2.39-9-1

RESULTS OF RANGE FINDING TOXICOLOGICAL TESTS ON A FLOOR TILE FORMULATION CONTAINING AN EPOXY RESIN

File T2.39-9-1
K No. Sample 1
Chg. 1270-26
Rept. By K. J. Olson

Signed Ken Olson Checked D.D. McCollister

Date April 18, 1958 Date April 21, 1958

THIS REPORT IS THE PROPERTY
OF
THE DOW CHEMICAL COMPANY

PROBLEM

A worker handling either the floor tile formulation or a component of it containing an epoxy resin has reacted with a skin rash similar to that produced by skin sensitizers. The material has been submitted to the Biochemical Research Laboratory for toxicological investigation and definition of industrial handling hazards.

S1-0090549

CONCLUSIONS

Results of range finding skin irritation tests indicate that the material either in the dry or moist state is essentially non-irritating to intact and abraded skin. It should be pointed out that these tests do not indicate skin sensitizing properties. These properties can best be defined by taking the project outside of The Dow Chemical Company for studies on human skin.

Due to the fact that this floor tile formulation contains a small amount of epoxy resin, it is possible that the material possesses the property of producing skin sensitization. Several

(Continued)

CONCLUSIONS (CONTINUED)

epoxy resins of similar nature have been found to be rather potent skin sensitizers when tested on human subjects. The rash produced by skin sensitizing chemicals is characterized as an allergic, edematous, contact-type dermatitis which may result in a very serious skin condition. It is recommended that skin contact with this material be avoided. Protective clothing should be worn at all times where the possibility of gross skin contamination exists.

These conclusions are based upon range finding toxicological tests and are limited to precautions for industrial handling of the material. Development of specific uses will require consideration of the health problems presented and of the need for further toxicological studies.

ST0000550

BIOCHEMICAL RESEARCH DEPARTMENT

THE DOW CHEMICAL COMPANY

MIDLAND MICHIGAN

DATA SHEET OF PROPERTIES, HEALTH HAZARDS, AND PRECAUTIONS FOR SAFE HANDLING OF MATERIALS

MOLECULAR FORMULA		CHEMICAL NAME
		Floor Tile Formulation
MOLECULAR WEIGHT	INDUSTRIAL HYGIENE STANDARD	SYNONYMS

STRUCTURAL FORMULA - OR COMPOSITION

	Parts		Parts
Resin (Chlorinated polyethylene)	17.5	Metasap (Contains epoxy resins)	1.5
COB } plasticisers	2.25	Sand	12.5
Monoplex } plasticisers	2.25	Asbestos 7M	19.0
Aluminum stearate } lubricants	0.10	Titanium dioxide	5.0
Paraffin } lubricants	0.10		

PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT	EXPLOSIVE LIMITS (% BY VOL. IN AIR)	FLASH POINT	IGNITION TEMP.	MELTING POINT	VAPOR PRESSURE mm Hg 25°C
°C mmHg.	None	None	None °C	°C	None

CORROSIVENESS (To Common Metals)	PHYSICAL STATE	COLOR
Not corrosive	Powder	Grey

CHEMICAL REACTIVITY	ODOR (Include Concentration in Air)
Not reactive	Essentially none

STABILITY (To pH Change, Heat, Light)

Very stable

TOXIC PROPERTIES

TYPE OF CONTACT		CLASSIFICATION OF TOXIC PROPERTIES	
EYE		☒ May cause no response or no more than very slight to slight transitory pain and/or irritation of the eyelids.	☐ May cause some permanent loss of vision (this includes damage to cornea or internal injury which is incompletely healed in one week.)
		☐ May cause sufficient injury to the eye to result in loss of time from work. (This includes damage to the cornea which heals or nearly heals in a week and/or considerable conjunctival irritation with edema.)	☐ Vapor exposure may cause severe pain, lacrymation or serious injury to the eyes.
SKIN		☐ Single prolonged exposure (hours) causes no effect. Several repeated prolonged exposures may or may not cause the development of some slight irritation.	☒ ~~Single short exposure (minutes) may cause considerable irritation and/or~~ single prolonged or frequently repeated ~~short~~ exposures ~~cause a burn and/or may cause systemic injury, even death.~~ may cause allergic dermatitis
		☐ Single prolonged exposure may cause some reddening of the skin. Repeated prolonged contacts may cause appreciable irritation, possibly a mild burn and/or may cause appreciable systemic injury due to absorption.	☐ An exposure rapidly causes severe burns and/or serious systemic injury, even death.
INHALATION — * DUST OR MIST		☐ No systemic injury expected. No irritation to nose and throat in dusty or misty atmospheres.	☐ Dusty or misty atmosphere painful to nose and throat (intolerable to most people) and/or exposure may cause serious systemic injury.
		☒ ~~These and more irritation in a dusty or misty atmosphere is painful but not intolerable and/or~~ prolonged or repeated exposures may cause systemic injury.	☐ Short exposure (minutes) may cause death or serious systemic injury.
INHALATION — VAPOR		☐ Exposures do not cause any effects other than some very slight irritation or pain to the eyes or respiratory passages at the most.	☐ Exposures may cause extreme drowsiness, and/or serious systemic injury, and/or may cause intolerable irritation to the respiratory passages.
		☐ Single exposures exceeding 1/2 hour, or frequently repeated exposures of shorter duration, may cause slight anesthesia and/or slight systemic injury, and/or cause appreciable, but not intolerable, irritation of respiratory passages.	☐ Short exposures may cause unconsciousness, and/or serious systemic injury, including death.
		☐ Even very short exposure will cause serious systemic injury or death.	
INGESTION		☒ Amounts which may be swallowed incidental to industrial handling will not cause injury. However, if substantial quantities should be swallowed, more or less serious effects may occur.	☐ Amounts which may be swallowed incidental to industrial handling and use may cause serious injury.

COMMENTS

* Estimated on basis of asbestos and silica content.

ST0000551

DOW 00151

Floor Tile Formulation

	DEGREES OF EXPOSURE RELATED TO TYPES OF OPERATION		PRECAUTIONS (SEE CODE BELOW)				
			EYES	SKIN	INHALATION* DUST OR MIST	INHALATION* VAPOR	INGESTION
I	NO CONTACT	Characterized by remote operation with equipment isolated from the work area. The persons entering isolated areas will require the personal protection outlined for IV below.	A	A	A		A
II	MINOR CONTACT	Characterized by closed systems with equipment vented outside the work area; instrument control; mechanical handling of materials in bulk. Examples are: continuous reactors, stills and filters; enclosed conveyors; ventilated packaging.	B	A	A		A
III	OCCASIONAL DAILY CONTACTS	Characterized by manual handling of materials in packages such as bags, drums and fiberpaks. Ventilation may be provided for specific jobs. Many batch operations fall into this category.	B	D	D		A
IV	GROSS CONTACT LIKELY	Characterized by hand operation. Examples are: Emergency repairs, cleaning equipment, cleaning filters, taking care of spills, packaging volatile or dusty materials without ventilation, wheeling and tray drying.	C	D	E		A

EYE CONTACT

- A No eye protection needed.
- B Use safety glasses without side shields.
- C Use safety glasses with side shields.
- D Use chemical workers goggles.
- E Use gas tight goggles or a full face gas mask.

SKIN CONTACT**

- A A bath and clean clothes once per week along with the usual washing at mealtimes should be adequate precautions.
- B Grossly contaminated clothing and shoes must be removed not later than the end of the work period and must be thoroughly cleaned before re-use.
- C Require shower at the end of the work period and clean clothing from the skin out at the start of each work day.
- D Clothing should be changed and skin washed promptly upon any detectable contact. Each use will require special consideration to determine suitable protective devices and standards of personal cleanliness.
- E Impervious clothing such as rubber boots, rubber aprons, and rubber gloves will be required. Specific items will be dictated as required by circumstance.

INHALATION

DUST OR MIST

- A No respiratory protection.
- B No protection required for exposure of thirty min. duration or less to obviously dusty atmospheres. Exposures of longer duration will require the use of a dust respirator bearing the approval of the U. S. Bureau of Mines for the use with toxic dusts.
- D Any exposure to obviously dusty atmospheres will require a dust respirator bearing the approval of the U. S. Bureau of Mines for use with toxic dusts.
- E Any exposure to dusty atmospheres will require the use of an airline respirator, blower mask, or Chemox mask.

VAPOR

- A No precautions necessary.
- B No precautions necessary for single exposures of less than 1/2 hour. Longer single exposures, or frequently repeated exposures will require a gas mask or respirator equipped with appropriate canister.
- C No precautions necessary for single exposures of no more than ten minutes. Longer exposures either single or repeated, will require gas mask or respirator equipped with appropriate canister.
- D Gas mask with appropriate canister required at all times.
- E Evacuate area at once and enter only with airline respirator, blower mask or Chemox mask.

INGESTION

- A No unusual procedures required.
- E Food and tobacco should not be present in the work area. Hands and face should be washed before smoking and eating.

COMMENTS

**GOOD PRACTICE REQUIRES THAT GROSS AMOUNTS OF ANY CHEMICAL BE REMOVED FROM THE SKIN AS SOON AS IS PRACTICAL

*SUITABLE GAS MASK CANISTER

Dust respirator

* Control required because of the presence of asbestos and silica.

ST0000552

SIGNED K. J. Olson D. D. McCollister CHECKED H. R. Hoyle

DATE 3-13-58 4-1-58 DATE 4-7-58

DOW 00152

FIRST AID MEASURES

EYE CONTACT	[ ]	If the eyes are contaminated, they should be flushed immediately with copious amounts of flowing water for at least 15 minutes.
	[ ]	Medical attention should be obtained if irritation persists or develops after washing of the eyes.
	[ ]	Medical attention should be obtained.
	[ ]	MEDICAL ATTENTION SHOULD THEN BE OBTAINED WITHOUT DELAY.
SKIN CONTACT	[ ]	Any injuries or irritations which may develop should receive medical attention.
	[ ]	Contaminated clothing and shoes should be removed and not re-used until thoroughly cleaned.
	[ ]	Wash contaminated skin with soap and plenty of water.
	[ ]	Contaminated clothing, including shoes, should be removed and the affected skin area should be washed thoroughly with soap and plenty of water.
	[ ]	Medical attention should then be obtained.
	[ ]	Contaminated clothing and shoes should not be re-used until thoroughly cleaned.
	[X]	All contaminated clothing, including shoes, must be removed immediately and the affected skin area flushed thoroughly with water from a safety shower, or other suitable device and cleansed with soap and plenty of water.
	[X]	MEDICAL ATTENTION MUST THEN BE OBTAINED AS RAPIDLY AS POSSIBLE.
	[X]	Contaminated clothing including shoes, must not be re-used until thoroughly cleaned or must be discarded.
INHALATION	[ ]	If a person should experience any noticeable ill effects from breathing the vapor or fumes of this material, medical attention should be obtained promptly.
	[ ]	If a person should be overcome from breathing this material, he should be removed to fresh air at once, be made to rest, kept warm, and MEDICAL ATTENTION SHOULD BE OBTAINED IMMEDIATELY. If breathing stops, artificial respiration should be administered.
INGESTION	[ ]	If appreciable amounts of material are swallowed, vomiting should be induced by tickling the back of the tongue with the finger or by giving an emetic such as 2 tablespoonfuls of table salt in a glass of warm water. Medical attention should then be obtained.
	[ ]	If the material is swallowed, vomiting must be induced by tickling the back of the tongue with the finger or by giving an emetic such as 2 tablespoonfuls of table salt in a glass of warm water. MEDICAL ATTENTION SHOULD THEN BE OBTAINED WITHOUT DELAY

COMMENTS:

ST0000553

SAMPLE INFORMATION

C. R. I. Name: Floor tile formulation

Source: R. A. Erhart - 433 Bldg.

Sample No. 1

Date Request Received: 2-6-58

Date Sample Received: 2-6-58

Physical State: Solid - powder

Composition:

Resin (chlorinated polyethylene)	17.5 parts
COB-plasticizer	2.25 parts
Monoplex-plasticizer	2.25 parts
Aluminum stearate-lubricant	0.10 parts
Paraffin-lubricant	0.10 parts
Metasap (contains an epoxy resin)- heat stabilizer	1.5 parts
Sand	12.5 parts
Asbestos shorts	19.0 parts
Titanium dioxide	5.0 parts

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DOW 00154

Skin Contact - Rabbit

Material	Condition of Skin	No. of Appl.	Site	Response-Remarks
Undiluted (Dry)	Intact	10	Belly	No irritation observed.
Undiluted (Dry)	Abraded	3	Belly	No irritation observed.
Undiluted (Wet)	Intact	10	Belly	No irritation observed.
Undiluted (Wet)	Abraded	3	Belly	No irritation observed.

Skin Absorption

There is no indication, from the skin irritation tests conducted, that this material is absorbed through the skin in toxic amounts.

ST0000555

INDEX HEADINGS

C. R. I. Name: Floor tile formulation

DISTRIBUTION

The Dow Chemical Company, Midland
Director of Research - R. H. Boundy
Central Research Index
Coatings Technical Service - R. A. Erhart

Midland Division
Medical Department - Dr. H. H. Gay
Safety Department - W. L. Tisdale

Texas Division
Central Research Index

Western Division
Central Research Index

vmv

ST0000556

ASSIGNED TO Ko

BIOCHEMICAL RESEARCH DEPARTMENT

TOXICOLOGY WORK SHEET

K. NO. Sample 1

MATERIAL Floor Tile Formulation

FILE NO. T 2.39-9.1

ACCOUNT NO. 1270-26

TIME CHARGE 7100

DATE OF REQ. 2/6/58

DO	TEST	ANIMALS	NO. ANIMALS /DOSE	SOLVENT	DOSE	DONE
	ACUTE ORALS:	RATS		CORN OIL	.063	
		CAVY		WATER	.126	
		RABBITS		WT. OUT	.252	
		CHICKS			.50	
					1.0	
					2.0	
					3.98	
					7.95	
	EYE CONTACT	RABBITS		PROPYLENE GLYCOL	100%	
				WATER	10%	
					1%	
	SKIN CONTACT: wet & dry	RABBITS		DOWANOL 50B	~~100%~~	
				WATER	10%	3-11
					1%	
	PATCH	RABBITS				
	TIME					
	CONCENTRATION					
	SKIN ABSORPTION:	RAT		PROPYLENE GLYCOL		
		RABBITS		WATER	.126	
				CORN OIL	.252	
					.50	
					1.0	
	CUFF TECHNIQUE	24 HOURS			2.0	
	CLIPPED BELLY	3 HOURS			3.98	
	ACUTE VAPOR:	RATS				
	ROOM TEMPERATURE °C	SAT. ppm				

OTHER:

(SEND 2ND. SHEET OUT)

ST0000557

READY TO IBM [illegible] 3/11/58

IBM'ED 3/12/58 BY Ks

DICTATED / /

DOW 00157

REQUEST FOR APPLICATIONS TESTING
AGRICULTURAL AND BIOCHEMICAL RESEARCH

(3) BIOCHEMICAL FILE NO. T2.39-9-1

(1) K - NUMBER [illegible]

NOTE: DO NOT USE BLUE INK TO FILL OUT THIS FORM.
NO ERASURES PERMITTED.

(2) MOLECULAR FORMULA

(4) NAME CRI APPROVED: Floor Tile Formulation

(5) LAB. CODE

(6) SUBMITTED BY: R.A. Erhart ph 8636 433 Bldg. CTS

(7) SOURCE OUTSIDE DOW

(8) LAB REFERENCE

DATE SAMPLE PREP.

(9) DATE SUBMITTED: 2-6-58

REPORT RESULTS TO

PRODUCT STATE: ☐ EXPLORATORY RESEARCH ☐ DEVELOPMENT ☐ TECHNICAL SERVICE ☐ SALES

(10) FIRST LITERATURE REFERENCE

(11) PATENT INFORMATION: PATENT NUMBER | CASE NUMBER | DISCLOSURE NUMBER

STRUCTURAL FORMULA (OR GIVE CONSTIUENTS OF MIXTURES AND POLYMERS)

Formulation:
1) Resin (chlorinated polyethylene) 17.5 parts
2) COB } plasticisers 2.25 "
3) monoplex } 2.25 "
4) aluminum stearate } lubricants 0.10 "
5) paraffin 0.10 "
6) metasap (contains epoxy resin) 1.5 " - (heat stabilizer)

PHYSICAL PROPERTIES — THIS SAMPLE

MELTING POINT °C	BOILING POINT AT MM	SPECIFIC GRAVITY	ESTIMATED PURITY %
APPEARANCE		STABILITY (TO pH CHANGE, HEAT, ETC.)	

BEST KNOWN SAMPLE

MELTING POINT °C	BOILING POINT AT MM	SPECIFIC GRAVITY	ESTIMATED PURITY %
APPEARANCE		STABILITY (TO pH CHANGE, HEAT, ETC.)	

SOLUBILITY AT ROOM TEMPERATURE (DETERMINE WHERE POSSIBLE, OTHERWISE ESTIMATE)

	< 1%	1-10%	10-25%	> 2
WATER				
ACETONE				
10% NaOH				
95% ETHANOL				
XYLENE (COMM)				
KEROSENE				

STOCK ON HAND

AMOUNTS SENT TO: MIDLAND | SEAL-BEACH | INFRA-RED

HANDLING PRECAUTIONS

RECEIVED 6 9 Biochem. [illegible]

BIOLOGICAL TEST REQUESTED: (USE REVERSE SIDE FOR OTHER APPLICATIONS)

☐ GENERAL SCREENING ☑ TOXICOLOGY LAB (REASON OR PROBLEM, ALSO KNOWN USE)

Test for skin irritation

SPECIFIC TESTS:

7) sand 12.5 parts
8) asbestos shorts 19.0 "
9) titanium dioxide 5.0 "

DO NOT WRITE BELOW THIS LINE

Note: R.A. Erhart reached with a skin rash from handling these materials. It is quite possible that the metasap might be incriminated due to the epoxy resin.

NOTED BY | DATE | SAMPLE SENT TO

ST0000558

DOW 00158

ASSIGNED TO Ko

BIOCHEMICAL RESEARCH DEPARTMENT

SKIN CONTACT - IRRITATION

K. NO. Sample 1

MATERIAL Floor Tile Formulation (Dry)

TEST BY REPEATED APPLICATION AS

% MATERIAL SOLUTION IN

FILE NO. T 2.39-9-1

ACCOUNT NO. 1270-26

TIME CHARGE 7100

DATE OF REQ. 2/6/58

RABBIT NO. 4830

CAGE NO. 1659

DATE		2/17	2/18	2/19	2/20	2/21	2/24	2/25	2/26	2/27	2/28	3/3	3/5	3/7	3/10
DAYS ON EXPOSURE		0	1	2	3	4	7	8	9	10	11	14	16	18	21
APPLICATION NO.															
ON EAR IBM GRADE	HYPEREMIA														
	EDEMA														
	NECROSIS														
	EXFOLIATION														
	HAIR LOSS														
	SCAB														
	SCAR														
	THICKNESS (MM)														
ON ABDOMEN INTACT	APPLICATION NO.	1	2	3	4	5	6	7	8	9	10				
IBM GRADE	HYPEREMIA		1	1	1	1	1	1	1	1	1	1	X	X	1
	EDEMA		1	1	1	1	1	1	1	1	1	1			1
	NECROSIS		1	1	1	1	1	1	1	1	1	1			1
	EXFOLIATION		1	1	1	1	1	1	1	1	1	1			1
	SCAB														
	SCAR														
	THICKNESS (MM)	1.46					1.96					1.95			1.81
ON ABDOMEN ABRADED	APPLICATION NO.	1	2	3	X										
IBM GRADE	HYPEREMIA		1	1	1	1	1	1	1	1	1	1	X	X	1
	EDEMA		1	1	1	1	1	1	1	1	1	1			1
	NECROSIS		1	1	1	1	1	1	1	1	1	1			1
	EXFOLIATION		1	1	1	1	1	1	1	1	1	1			1
	SCAB		2	2	2	2	1	1	1	1	1	1			1
	SCAR						2	2	2	2	2	2			2
WEIGHT IN KG.		2.55					2.70					2.74			2.89

ST0000559

* COMMENTS ON BACK OF THIS PAGE

DOW 00159

SIGNED Nancy C. Greenhoe DATE 3 / 10 / 58

ASSIGNED TO Ko

ST0000560

BIOCHEMICAL RESEARCH DEPARTMENT

SKIN CONTACT - IRRITATION

K. NO. Sample 1

MATERIAL Floorline Formulation (wet)

TEST BY REPEATED APPLICATION AS

% MATERIAL SOLUTION IN

FILE NO. T 2.39-9-1

ACCOUNT NO. 1240-26

TIME CHARGE 7100

DATE OF REQ. 2/6/58

RABBIT NO. 4840

CAGE NO. 1660

DATE		2/17	2/18	2/19	2/20	2/21	2/24	2/25	2/26	2/27	2/28	3/3	3/5	3/7	3/10
DAYS ON EXPOSURE		0	1	2	3	4	7	8	9	10	11	14	16	18	21
APPLICATION NO.															
ON EAR	HYPEREMIA														
	EDEMA														
	NECROSIS														
IBM GRADE	EXFOLIATION														
	HAIR LOSS														
	SCAB														
	SCAR														
	THICKNESS (MM)														
ON ABDOMEN INTACT	APPLICATION NO.	1	2	3	4	5	6	7	8	9	10				
IBM GRADE	HYPEREMIA		1	1	1	1	1	1	1	1	1	1	X	X	1
	EDEMA		1	1	1	1	1	1	1	1	1	1			1
	NECROSIS		1	1	1	1	1	1	1	1	1	1			1
	EXFOLIATION		1	1	1	1	1	1	1	1	1	1			1
	SCAB														
	SCAR														
	THICKNESS (MM)	1.45					1.96					2.20			1.80
ON ABDOMEN ABRADED	APPLICATION NO.	1	2	3	X										
IBM GRADE	HYPEREMIA		2	2	1	1	1	1	1	1	1	1	X	X	1
	EDEMA		1	1	1	1	1	1	1	1	1	1			1
	NECROSIS		1	1	1	1	1	1	1	1	1	1			1
	EXFOLIATION		1	1	1	1	1	1	1	1	1	1			1
	SCAB		2	2	2	2+	1	1	1	1	1	1			1
	SCAR						3-	3-	3	3	3	3			3
WEIGHT IN KG.		2.94					2.85					3.01			3.16

* COMMENTS ON BACK OF THIS PAGE

DOW 00160

SIGNED Nancy C. Grandon

DATE 3/10/58

ASSIGNED TO Ko

ST0000561

BIOCHEMICAL RESEARCH DEPARTMENT

SKIN CONTACT - IRRITATION

K. NO. Sample 1

MATERIAL Floor Tile Formulation (Dry)

TEST BY REPEATED APPLICATION AS

% MATERIAL SOLUTION IN

FILE NO. T 2.39-9-1

ACCOUNT NO. 1270-26

TIME CHARGE 7100

DATE OF REQ. 2 16 58

RABBIT NO. 4830

CAGE NO. 1659

DATE		2/17	2/18	2/19	2/20	2/21	2/24	2/25	2/26	2/27	2/28	3/3	3/5	3/7	3/10		
DAYS ON EXPOSURE		0	1	2	3	4	7	8	9	10	11	14	16	18	21		
APPLICATION NO.																	
ON EAR	HYPEREMIA																
	EDEMA																
	NECROSIS																
IBM GRADE	EXFOLIATION																
	HAIR LOSS																
	SCAB																
	SCAR																
	THICKNESS (MM)																
ON ABDOMEN INTACT	APPLICATION NO.	1	2	3	4	5	6	7	8	9	10						
IBM GRADE	HYPEREMIA		1	1	1	1	1	1	1	1	1	1	X	X	1	X	
	EDEMA		1	1	1	1	1	1	1	1	1	1			1		
	NECROSIS		1	1	1	1	1	1	1	1	1	1			1		
	EXFOLIATION		1	1	1	1	1	1	1	1	1	1			1		
	SCAB																
	SCAR																
	THICKNESS (MM)	1.46					1.96					1.95			1.81		
ON ABDOMEN ABRADED	APPLICATION NO.	1	2	3	X												
IBM GRADE	HYPEREMIA		1	1	1	1	1	1	1	1	1	1	X	X	1	X	
	EDEMA		1	1	1	1	1	1	1	1	1	1			1		
	NECROSIS		1	1	1	1	1	1	1	1	1	1			1		
	EXFOLIATION		1	1	1	1	1	1	1	1	1	1			1		
	SCAB		2	2	2	2	1	1	1	1	1	1			1		
	SCAR						2	2	2	2	2	2			2		
WEIGHT IN KG.		2.55					2.70					2.74			2.89		

* COMMENTS ON BACK OF THIS PAGE

DOW 00161

SIGNED Nancy C. Greenhoe DATE 3 / 10 / 58

METHOD:

WHITE RABBITS ARE USED AS THE TEST ANIMALS. IF A LIQUID, THE MATERIAL IS APPLIED TO THE EAR FOR UP TO TEN TIMES. AS EITHER A LIQUID OR A SOLID IT IS APPLIED TO THE SHAVEN INTACT SKIN ON THE BELLY FOR UP TO TEN TIMES, AND TO ABRADED SKIN FOR UP TO THREE TIMES. THE INTACT AND ABRADED AREAS ARE COVERED WITH A COTTON PATCH THEN BANDAGED TO HOLD THE MATERIAL IN CONSTANT CONTACT WITH THE SKIN. EACH WORKING DAY THE AREA IS EXAMINED AND FRESH MATERIAL APPLIED. AFTER COMPLETING THE APPLICATIONS, THE AREAS ARE OBSERVED FOR HEALING FOR ONE WEEK.

GRADE	HYPEREMIA	EDEMA	NECROSIS	EXFOLIATION	HAIR LOSS	SCAB	SCAR
1	NONE	NONE	NONE	NONE	NONE	NONE	NONE
2	QUESTIONABLE	QUESTIONABLE	QUESTIONABLE	QUESTIONABLE	QUESTIONABLE	QUESTIONABLE	QUESTIONABLE
3	SLIGHT PINK	SLIGHT	SUPERFICIAL	SLIGHT	SLIGHT	SLIGHT CRUSTATION	SLIGHT
4	MODERATE PINK	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE CRUSTATION	MODERATE
5	RED	MARKED	DEEP	MARKED	MARKED	MARKED SCAB	MARKED
6	VERY RED	SEVERE	VERY DEEP	SEVERE	SEVERE	DEEP SCAB	SEVERE

DATE: COMMENTS:

ST0000662

DOW 00162

ASSIGNED TO Ko

ST0000563

BIOCHEMICAL RESEARCH DEPARTMENT

SKIN CONTACT - IRRITATION

K. NO. Sample 1

MATERIAL Headline Formulation (wet)

TEST BY REPEATED APPLICATION AS

* MATERIAL SOLUTION IN

FILE NO. T 2.39-9-1

ACCOUNT NO. 1270-26

TIME CHARGE 7100

DATE OF REQ. 2/6/58

RABBIT NO. 4840

CAGE NO. 1660

DATE		2/17	2/18	2/19	2/20	2/21	2/24	2/25	2/26	2/27	2/28	3/3	3/5	3/7	3/10
DAYS ON EXPOSURE		0	1	2	3	4	7	8	9	10	11	14	16	18	21
APPLICATION NO.															
ON EAR	HYPEREMIA														
	EDEMA														
	NECROSIS														
IBM GRADE	EXFOLIATION														
	HAIR LOSS														
	SCAB														
	SCAR														
	THICKNESS (MM)														
ON ABDOMEN INTACT	APPLICATION NO.	1	2	3	4	5	6	7	8	90	10				
IBM GRADE	HYPEREMIA		1	1	1	1	1	1	1	1	1	1			1
	EDEMA		1	1	1	1	1	1	1	1	1	1			1
	NECROSIS		1	1	1	1	1	1	1	1	1	1			1
	EXFOLIATION		1	1	1	1	1	1	1	1	1	1			1
	SCAB														
	SCAR														
	THICKNESS (MM)	1.45					1.96					2.20			1.80
ON ABDOMEN ABRADED	APPLICATION NO.	1	2	3	X										
IBM GRADE	HYPEREMIA		2	2	1	1	1	1	1	1	1	1			1
	EDEMA		1	1	1	1	1	1	1	1	1	1			1
	NECROSIS		1	1	1	1	1	1	1	1	1	1			1
	EXFOLIATION		1	1	1	1	1	1	1	1	1	1			1
	SCAB		2	2	2	24	1	1	1	1	1	1			1
	SCAR						3-	3-	3	3	3	3			3
WEIGHT IN KG.		2.94					2.85					3.01			3.16

* COMMENTS ON BACK OF THIS PAGE

DOW 00163

SIGNED Harvey C. Grumbles DATE 3/10/58

METHOD:

WHITE RABBITS ARE USED AS THE TEST ANIMALS. IF A LIQUID, THE MATERIAL IS APPLIED TO THE EAR FOR UP TO TEN TIMES. AS EITHER A LIQUID OR A SOLID IT IS APPLIED TO THE SHAVEN INTACT SKIN ON THE BELLY FOR UP TO TEN TIMES, AND TO ABRADED SKIN FOR UP TO THREE TIMES. THE INTACT AND ABRADED AREAS ARE COVERED WITH A COTTON PATCH THEN BANDAGED TO HOLD THE MATERIAL IN CONSTANT CONTACT WITH THE SKIN. EACH WORKING DAY THE AREA IS EXAMINED AND FRESH MATERIAL APPLIED. AFTER COMPLETING THE APPLICATIONS, THE AREAS ARE OBSERVED FOR HEALING FOR ONE WEEK.

GRADE	HYPEREMIA	EDEMA	NECROSIS	EXFOLIATION	HAIR LOSS	SCAB	SCAR
1	NONE	NONE	NONE	NONE	NONE	NONE	NONE
2	QUESTIONABLE	QUESTIONABLE	QUESTIONABLE	QUESTIONABLE	QUESTIONABLE	QUESTIONABLE	QUESTIONABLE
3	SLIGHT PINK	SLIGHT	SUPERFICIAL	SLIGHT	SLIGHT	SLIGHT CRUSTATION	SLIGHT
4	MODERATE PINK	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE CRUSTATION	MODERATE
5	RED	MARKED	DEEP	MARKED	MARKED	MARKED SCAB	MARKED
6	VERY RED	SEVERE	VERY DEEP	SEVERE	SEVERE	DEEP SCAB	SEVERE

DATE: COMMENTS