

ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9106260280 DOC. DATE: 91/06/17 NOTARIZED: NO DOCKET #
 FACIL: 50-387 Susquehanna Steam Electric Station, Unit 1, Pennsylv 05000387
 50-388 Susquehanna Steam Electric Station, Unit 2, Pennsylv 05000388

AUTH. NAME AUTHOR AFFILIATION
 FIELDS, J.S. Pennsylvania Power & Light Co.
 RECIP. NAME RECIPIENT AFFILIATION
 LEHMAN, S. Pennsylvania, Commonwealth of

SUBJECT: Forwards matl safety data sheets for three laundry detergent chemicals, for concurrence. Would like to evaluate detergents to determine if they are more effective cleaners than RC-8.

DISTRIBUTION CODE: C001D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 10
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NOTES: LPDR 1 cy Transcripts. 05000387
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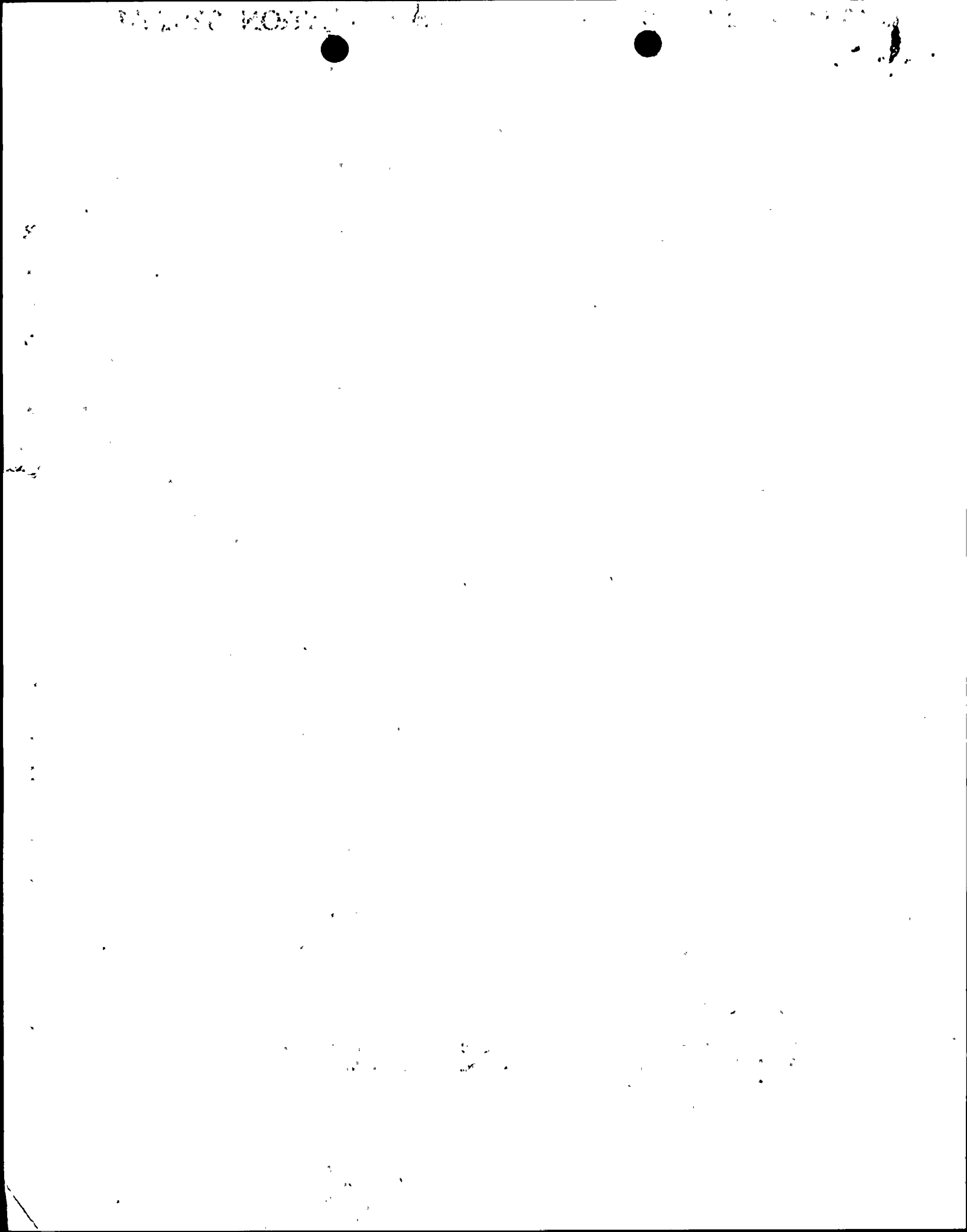
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	ID CODE/NAME	LTR	ENCL	ID CODE/NAME	LTR	ENCL		
	PD1-2 LA RALEIGH, J	3	3	PD1-2 PD	1	1		
INTERNAL:	ACRS	6	6	AEOD/DSP/TPAB	1	1		
	NRR/DET/ESGB 8D	1	1	OC/LFMB	1	0		
	OGC/HDS2	1	0	REG-FILE 01	1	1		
	RGN1 DRSS/RPB	1	1					
EXTERNAL:	EG&G SIMPSON, F	2	2	NRC PDR	1	1		
	NSIC	1	1					
NOTES:		2	2					

NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK, ROOM P1-37 (EXT. 20079) TO ELIMINATE YOUR NAME FROM DISTRIBUTION LISTS FOR DOCUMENTS YOU DON'T NEED!

TOTAL NUMBER OF COPIES REQUIRED: LTR 23 ENCL 21

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Pennsylvania Power & Light Company

Two North Ninth Street • Allentown, PA 18101 • 215 / 770-5151

June 17, 1991

Mr. Stanley Lehman
Bureau of Water Quality Management
Wilkes-Barre Regional Office
90 East Union Street - 2nd Floor
Wilkes-Barre, PA 18701-3296

SUSQUEHANNA STEAM ELECTRIC STATION
LAUNDRY DETERGENT REVIEW
CCN 741326 FILE R9-8A
PLE- 14387

Dear Mr. Lehman:

Attached for your concurrence are the material safety data sheets (MSDS) for three laundry detergent chemicals. We would like to evaluate these detergents to determine if they are more effective cleaners than RC-8, our current detergent, which is already included on our NPDES permit (PA 0047325) for the Susquehanna SES.

Based on information in these MSDSs we feel these chemicals are environmentally acceptable and should not have any adverse effects. These detergents would be discharged into Outfall 171 and eventually to the Susquehanna River through Outfall 071.

If you have any questions, please call me at (215) 774-7889.

Sincerely,

Jerome S. Fields
Sr. Environmental Scientist - Nuclear

jpi/ltf2497a(26)

Attachment

cc: NRC Document Control Desk
NRC Region I
Mr. J. J. Raleigh, NRC Project Manager

9106260280 910617
PDR ADOCK 05000387
P PDR

COPI 1/1

MATERIAL SAFETY DATA SHEET

MELLOW ORANGE SOLVENT

SECTION I - IDENTIFICATION

COMPANY NAME..... O'Neill Industries, Inc.
 ADDRESS 5101 Comly St., Phila., Pa. 19135
 (STREET,CITY,STATE,ZIP).
 PHONE NUMBER..... (215) 333-5700
 EFFECTIVE DATE..... 4/1/89
 CHEMICAL NAME..... Cleaning compound
 TRADE NAME..... MELLOW ORANGE SOLVENT
 CHEMICAL FAMILY..... Cleaning compound

SECTION II - HAZARDOUS INGREDIENTS

HAZARDOUS COMPONENTS	HAZARDOUS %	TLV (Units)	PROD. CAS #
1,8(9)-p-Methadiene	n/a	Not established	5989-27-5
2-Butoxyethanol	n/a	25 ppm (skin) TLV-TWA ACGIH 50 ppm (SKIN) PEL-TWA OSHA	111-76-2
Ethanol, 2-Amino-	n/a	3 ppm, ACGIH	141-43-5

SECTION III - PHYSICAL DATA

BOILING Point(F)..... 212-370° F
 VAPOR PRESSURE (mm Hg)... Unknown
 VAPOR DENSITY (Air=1)... Unknown
 SOLUBILITY IN H2O..... Emulsifiable
 APPEARANCE/ODOR..... Amber liquid, citris odor
 SPECIFIC GRAVITY (H20=1). .96
 EVAPORATION RATE..... Same as water

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT..... 163° F
 FLAMMABLE LIMITS.....
 LOWER FLAME LIMIT..... Unknown
 HIGHER FLAME LIMIT..... Unknown
 EXTINGUISH MEDIA..... In case of fire, use water spray, foam, dry chemical, or CO₂
 FOR FIRE..... Minimize breathing vapor or fumes. Cool fire exposed containers. Do not enter confined fire-spaces without proper protective clothing, including self contained air supply.
 UNUSUAL FIRE HAZARD..... None known

SECTION V - HEALTH HAZARD DATA

MATERIAL SAFETY DATA SHEET

MELLOW ORANGE SOLVENT

OTHER PROTECTIVE

EQUIPMENT.....

HANDLING AND STORAGE..... KEEP FROM FREEZING

Store in a cool, dry, well ventilated area.

Keep container closed when not in use.

Use with adequate ventilation.

DO NOT MIX WITH ANYTHING BUT WATER.

WEAR SAFETY GOGGLES AND RUBBER GLOVES WHEN HANDLING
THIS PRODUCT

KEEP OUT OF REACH OF CHILDREN.

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them to assure proper use of these materials and the safety and health of employees. The information contained herein pertains to concentrated or undiluted product only!

Luvak Inc.
722 Main Street
Boylston, MA 01505
508-869-6401

Analytical report no.
0-2441

Requested by:
Pennsylvania Power and Light Company
Two North Ninth Street
Allentown, PA 18101

Attention
R. Tombaugh
A6-2

Invoice number: 016923
Customers Purchase Order Number: S-03446-5

Date received: 3/26/91
Invoice date: 3/26/91

Description

One sample of Planisol M was analyzed for total chloride content after mixing 2 ounces in 5 gallons of water.

Results

PLANISOL M
2 ounces / 5 gallons of water

	<u>PPM</u>
Total chloride	65

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072



IDENTITY (As Used on Label and List) **PLANISOL M** *Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.*

Section I

Manufacturer's Name PLANISOL, INC.	Emergency Telephone Number 201-569-2020
Address (Number, Street, City, State, and ZIP Code) 452 HUDSON TERRACE	Telephone Number for Information SAME AS ABOVE
P.O. BOX 1302	Date Prepared 8 / 1 / 90
ENGLEWOOD CLIFFS, N.J. 07632	Signature of Preparer (optional)

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (total)
PLANISOL M CONTAINS NO HAZARDOUS INGREDIENTS PER 29 CFR 1910 SUB PART Z				

Section III — Physical/Chemical Characteristics

Boiling Point	N/A	Specific Gravity (H ₂ O = 1)	N/A
Vapor Pressure (mm Hg.)	N/A	Melting Point	N/A
Vapor Density (AIR = 1)	N/A	Evaporation Rate (Butyl Acetate = 1)	N/A
Solubility in Water COMPLETE			
Appearance and Odor LIGHT BLUE GRANULAR MIXTURE/ODORLESS			

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used) NONE	Flammable Limits NON-FLAMMABLE	LRL N/A	UEL N/A
Extinguishing Media NONE REQUIRED			
Special Fire Fighting Procedures NONE			

Unusual Fire and Explosion Hazards
NONE

Section V -- Reactivity Data

Stability	Unstable		Conditions to Avoid STRONG ACIDS
	Stable	X	

Incompatibility (Materials to Avoid) **MATERIALS CONTAINING STRONG ACIDS**

Hazardous Decomposition or Byproducts **NONE**

Hazardous Polymerization	May Occur		Conditions to Avoid STRONG ACIDS
	Will Not Occur	X	

Section VI -- Health Hazard Data

Route(s) of Entry	Inhalation? NA	Skin? X	Ingestion? X
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Health Hazards (Acute and Chronic)

ACUTE: NONE
CHRONIC: IRRITATION OF THE EYES
 Carcinogenicity: NTP? NO IARC Monographs? NO OSHA Regulated? NO

PLEASE NOTE: PLANISOL M CONTAINS NO KNOWN CANCER CAUSING AGENTS

Signs and Symptoms of Exposure
PROLONGED CONTACT CAN RESULT IN MILD SKIN IRRITATION

Mod. Symptoms
 General Symptoms Aggravated by Exposure **DERMATITIS**

Emergency and First Aid Procedures
SKIN: WASH WITH SOAP & WATER, EYES: FLUSH WITH WATER AT LEAST 15 MINUTES
DO NOT INDUCE VOMITING. GIVE VINEGAR SOLUTION

Section VII -- Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled
CONTAIN, WEEP, SOAK UP WITH RAGS, SAND OR FLOOR ABSORBENT.

RESIDUE MAY BE FLUSHED WITH WATER.

ALL SURFACTANTS IN PLANISOL M ARE BIODEGRADABLE

Waste Disposal Methods
IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS

Precautions to Be Taken in Handling and Storage
AVOID CONTACT WITH EYES AND PROLONGED CONTACT WITH SKIN

Other Precautions
KEEP FROM FREEZING

Section VIII -- Control Measures

Respiratory Protection (Specify Type)
NONE REQUIRED

Ventilation	Local Exhaust	ACCEPTABLE	Special	NONE
	Mechanical (General)	NOT REQUIRED	Other	NONE

Protective Gloves **NOT NEEDED** Eye Protection **GOGGLES**

Other Protective Clothing or Equipment **EYE BATH**

Work/Hygiene Practices **WASH HANDS WITH SOAP AND WATER AFTER USE**

perclone CORPORATION
A Subsidiary of West Chemical Products, Inc.

MATERIAL SAFETY DATA SHEET

(Confidential Formula - Information not to be disclosed to other than recipient and other regulatory agencies.)

74 HUDSON AVENUE, TENAFLY, NJ 07670
EMERGENCY TEL. NO. (201) 567-3000

DATE October 25, 1989

SECTION I. PRODUCT IDENTIFICATION

TRADE NAME	CITRIKLEEN
FORMULA	water, d-Limonene, alkyl aryl sulfonate, diethylene glycol monobutyl ether alkyl aryl polyether, ethanalamine, EDTA type chelate, butylated hydroxytoluene
CHEMICAL FAMILY	Liquid Cleaner

SECTION II. HAZARDOUS INGREDIENTS

COMPONENT OR MATERIAL CHEMICAL NAMES	CAS NO.	OSHA PEL	ACGIH TLV
* Ethanalamine	141-43-5	3PPM (6 PPM STEL)	3 PPM
* Diethylene Glycol Monobutyl Ether	112-34-5	N/A	N/A
* Listed SARA Title III			

SECTION III. PHYSICAL DATA

BOILING POINT (°F)	Approximately 212	VAPOR PRESSURE, mm Hg @ 20°C (68°F)	Not Determined
EVAPORATION RATE (acetone #1)	0.08	VAPOR DENSITY (AIR=1) @ 60-80°F	Not Determined
SOLUBILITY IN H ₂ O, % by wt @ 20°C (68°F)	Forms stable emulsion	* VOLATILES BY VOL. @ 70°F	~70
SPECIFIC GRAVITY H ₂ O = 1 @ 70°F	0.976	PH	As Received: 10.3 (10% Solution): 10.0
APPEARANCE & ODOR	Clear, light-yellow liquid; citrus odor.		

SECTION IV. FIRE AND EXPLOSION DATA

FLASH POINT (Method Used)	165°F (COC); 125°F (PMCC)	FLAMMABLE EXPLOSIVE LIMITS	UPPER Not Determined	LOWER Not Determined
EXTINGUISHING MEDIA	CO ₂ , dry powder, foam type			
SPECIAL FIRE FIGHTING PROCEDURES	Treat as Class B (Oil Type) fire.			
UNUSUAL FIRE & EXPLOSION HAZARDS	None			

SECTION V. EMERGENCY AND FIRST AID PROCEDURES

EYES	Immediately flush with water for several minutes. See physician immediately.
SKIN	Flush with water for several minutes. If irritation develops or persists, consult physician.
INHALATION	Remove to fresh air. Perform artificial respiration if needed.
INGESTION	Give large amounts of milk or water. Seek medical attention.

SECTION VI - HEALTH HAZARD DATA

ROUTE(S) OF ENTRY	Eyes	INHALATION	X	SKIN	X	INGESTION	X
HEALTH HAZARDS (ACUTE AND CHRONIC) Acute: Corrosive to skin, eyes, mouth, & esophagus on contact. Inhalation: May cause dizziness & drowsiness & irritation to mucous membrane. Chronic: Ethanolamine has been linked to liver & kidney damage in animals.							
CARCINOGENICITY		NTP	N.A.	IARC MONOGRAPHS	N.A.	OSHA REGULATED	
SIGNS AND SYMPTOMS OF EXPOSURE Inhalation - May cause dizziness & drowsiness & irritation to mucous membrane. Inhalation of high vapor concentrations may cause dizziness & drowsiness. Skin - Redness or irritation to skin. Eyes - Irritation or stinging sensation.							
MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE Cuts and abrasions							
EMERGENCY AND FIRST AID PROCEDURES							
SEE SECTION V							

SECTION VII. REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY	Product is stable
INCOMPATIBILITY	Strong acids.
HAZARDOUS DECOMPOSITION PRODUCTS	None known
CONDITIONS CONTRIBUTING TO POLYMERIZATION	Will not occur

SECTION VIII. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED	Collect on absorbent material or mop up with water.
NEUTRALIZING CHEMICALS	Not Applicable
WASTE DISPOSAL METHOD	Allow used emulsions to separate, skim off top oil layer and discharge bottom layer in accordance with EPA regulations.

SECTION IX. VENTILATION AND PERSONAL PROTECTIVE EQUIPMENT

VENTILATION REQUIREMENTS		Local exhaust recommended in confined areas.
SPECIAL PERSONAL PROTECTIVE EQUIPMENT	RESPIRATORY	Maintain adequate ventilation.
	EYE	Splash proof goggles, if splashing is anticipated.
	GLOVES	Solvent resistant (rubber/neoprene)
	OTHER CLOTHING & EQUIPMENT	Use goggles, apron, boots, as required.

SECTION X. SPECIAL PRECAUTIONS INCLUDING STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING & STORAGE (Always refer to label directions when using)	Do not re-use container. Dispose of container in accordance with local, state and federal EPA regulations.
D.O.T. SHIPPING CLASSIFICATION	Alkaline Corrosive Liquid, N.O.S. (NA 1719)

CITRIKLEEN^R TOXICITY TEST RESULTS

INHALATION: Rats, 1 hour, 200 mg/l, 2 weeks, non-toxic

DERMAL: Rabbits, LD₅₀ >2.0 g/kg, corrosive

SKIN & EYES: Corrosive per DOT test

RAINBOW TROUT: 96 hour LC₅₀ = 15 PPM, 18 PPM
for reference.
Palmolive dishwashing liquid = 13
Sunlight " " = 13
Mr. Clean " " = 30

FATHEAD MINNOW: 96 hour LC₅₀ = 15-20 PPM

OPOSSUM SHRIMP: 96 hour LC₅₀ = 5.2 PPM

BRINE SHRIMP: 48 HOUR LC₅₀ = 32 PPM

KILLIFISH : 96 HOUR LC₅₀ = 18 PPM

AMES: Passes at 50 PPM (Non-mutagenic)