

CODING FORMS FOR SRC INDEXING

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Date Produced	01/24/01	Date Received	01/30/01	TSCA Section	8E
Submitting Organization		CONFIDENTIAL			
Contractor					
Document Title		INITIAL SUBMISSION: LETTER FROM [] TO USEPA, PRELIMINARY REPORT OF SCREENING ACUTE INHALATION TOXICITY STUDY OF 2-ETHYLHEXYL CHLOROFORMATE IN RATS, DATED 1/24/01 (SANITIZED)			
Chemical Category		2-ETHYLHEXYL CHLOROFORMATE			

8EHQ-0101-14854

Via Certified Mail - Z 267 687 181
Return Receipt Requested

January 24, 2001

Document Processing Center (TS-790)
TSCA Section 8(e) Coordinator
Office of Toxic Substances
U.S. Environmental Protection Agency
1200 Pennsylvania Ave, NW
Washington, D.C. 20460

COMPANY SANITIZED

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Re: Toxic Substances Control Act (TSCA)
Section 8(e) - Notification of Substantial Risk
2-Ethylhexyl chloroformate (2-EHCF)
CAS #24468-13-1

Dear Sir or Madam:

This notification is being submitted in accordance with TSCA provisions for reporting substantial risk (§8(e)) information. As the study sponsor, hereby submits a preliminary report of a study utilizing a screening protocol regarding the inhalation toxicity of 2-Ethylhexyl chloroformate (2-EHCF). The study was a result of need to verify the acute inhalation toxicity level of 2-Ethylhexyl chloroformate (2-EHCF) after reviewing test results of two current manufacturers reflecting a wide variance in results.

The summary of the study is presented in the following text:

Name of study: "Acute Inhalation Toxicity Study in Rats"

Chemical studied: 2-Ethylhexyl chloroformate (2-EHCF)

Chemical Abstract Service ("CAS") Registry Number: CAS #24468-13-1

Laboratory:

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Summary of effects:

The exposure levels tested and the corresponding results are the following:

Animals' exposure concentration, aerosol: Gravimetric = 4.02 mg/L
Nominal = 24.14 mg/L

Intended exposure period: 4 hours

Study results: All ten (10) animals (5 males, 5 females) died within 190 (3 hr. 10 min.) minutes of exposure.

Background:

reviewed the Material Data Safety Sheet (MSDS) from two sources for 2-EHCF, and identified a discrepancy in the test results between two sources. The MSDS for 2-EHCF reports an LC₅₀ = 0.27 mg/L for a 4 hour exposure. (See Attachment 1)
The MSDS for 2-EHCF reports a 100% survival at >3.44 mg/L for a 4 hour exposure. (See Attachment 2)
Due to this discrepancy in test results, opted to run the additional inhalation toxicity study.

A complete copy of the final test results will be provided upon receipt from the testing laboratory. If you have questions, please contact

Sincerely,

Attachments: 3

Cc: TSCA 8(e) File w/ attachments

January 24, 2001

Document Processing Center (TS-790)
TSCA Section 8(e) Coordinator
Office of Toxic Substances
U.S. Environmental Protection Agency
1200 Pennsylvania Ave, NW
Washington, D.C. 20460

Re: Support Information for Confidentiality Claims – TSCA §14(c)
Toxic Substances Control Act (TSCA) / §8(e) – Notification of Substantial Risk
2-Ethylhexyl chloroformate (2-EHCF)
CAS #24468-13-1

The following Confidential Business Information is in support of confidentiality claims in regards to 2-Ethylhexyl chloroformate (2-EHCF) and
as the study sponsor for the inhalation toxicity screening test initiated by

Substantiation Questions:

1. Is your company asserting this confidential business information (CBI) claim on its own behalf? *Yes*
2. For what period do you assert your claim(s) of confidentiality? If the claim is to extend until a certain event or point in time, please indicate that event or time period. Explain why such information should remain confidential until such point.

3. Has the information that you are claiming as confidential been disclosed to any other governmental agency, or to this Agency at any other time? **No**
Identify the Agency to which the information was disclosed and provide the date and circumstances of the same. **N/A**
Was the disclosure accompanied by a claim of confidentiality? If yes, attach a copy of said document reflecting the confidentiality agreement. **N/A**
4. Briefly describe any physical or procedural restrictions within your company relating to the use and storage of the information you are claiming as CBI.

5. If anyone outside your company has access to any of the information claimed CBI, are they restricted by confidentiality agreement(s)? **Yes**
If so, explain the content of the agreement(s).

6. Does the information claimed as confidential appear or is it referred to in any of the following:
 - a. Advertising or promotional material for the chemical substance or the resulting end product – **No**
 - b. Material safety data sheets or other similar materials (such as technical data sheets) for the substance or resulting end product (Include copies of this information as it appears when accompanying the substance and/or product at the time of transfer or sale) – **No**
 - c. Professional or trade publications - **No**
 - d. Any other media or publications available to the public or to your competitors – **No**
7. Has EPA, another federal agency, or court made any confidentiality determination regarding information associated with this substance? If so, provide copies or such determinations. **No**
8. Describe the substantial harmful effects that would result to your competitive position if the CBI information were made available to the public. In your answer, explain the causal relationship between disclosure and any resulting substantial harmful effects. Consider in your answer such constraints as capital and marketing costs, specialized technical expertise, or unusual processes and your competitors' access to your customers. Address each piece of information claimed CBI separately.

9. Has the substance been patented in the U.S. or elsewhere?
is not aware of a patent held on 2-EHCF.

Is a patent for the substance currently pending?
is not aware if a patent is pending on 2-EHCF.

10. Is this substance/product commercially available and if so, for how long has it been available on the commercial market? *Yes. 2-EHCF has been on the market for at least ten years.*

- a. If on the commercial market, are your competitors aware that the substance is commercially available in the U.S.? *Yes*
- b. If not already commercially available, describe what stage of research and development (R&D) the substance is in, and estimate how soon a market will be established. *N/A*
- c. What is the substance used for and what type of product(s) does it appear in?

11. Describe whether a competitor could employ reverse engineering to identically recreate the substance. *N/A*

12. Do you assert that disclosure of this information you are claiming CBI would reveal:
a. Confidential processes used in manufacturing the substance? *No*
b. If a mixture, the actual portions of the substance in the mixture? *No*
c. Information unrelated to the effects of the substance on human health or the environment? (If your answer to any of the above questions is yes, explain how such information would be revealed.)

13. Provide the Chemical Abstract Service Registry Number for the product, if known.
CAS #24468-13-1

14. Is the substance or any information claimed CBI the subject of FIFRA regulation or reporting? If so, explain. *No*

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 2-Ethylhexyl Chloroformate
PRODUCT ID:
SYNONYMS: Carbonochloridic Acid, 2-Ethylhexyl Ester; 2-EHCF; C₉H₁₇O₂Cl
DATE: 10/06/1998
EDITION NO.: 011

For Product Information (8am-5pm Eastern time):

PREPARER:

2. COMPOSITION/INFORMATION ON INGREDIENTS

Material/CAS Number	Percent
2-ethylhexyl chloroformate 24468-13-1	>98
Phosgene 75-44-5	<0.3

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

DANGER! Poison. Corrosive - Causes severe burns to eyes and skin. Harmful if inhaled. Combustible.

Precautions: Do not get in eyes, on skin, or on clothing. This product is corrosive and can cause severe burns. It can cause severe irritation and/or burns to the skin. Even small amounts splashed into the eyes can cause blindness. Do not breathe vapors. Vapors may cause severe irritation and illness. Use only with adequate ventilation. Ventilation must be sufficient to minimize employee

2-Ethylhexyl Chloroformate 10/06/1998

exposure in the work area. Do not swallow. Swallowing can cause severe irritation or burns. Wash thoroughly every day after work. Do not eat, drink or smoke in work area.

4. FIRST AID MEASURES

INHALATION: Remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Call a physician.

EYE/SKIN CONTACT: In case of contact, immediately flush eyes and skin with plenty of water (soap and water for skin) for at least 15 minutes. Get medical attention. Thoroughly clean contaminated clothing and shoes before reuse or discard.

INGESTION: If swallowed, give at least 3-4 glasses of water and 1-2 recommended doses of antacids. Do not induce vomiting. Do not give anything by mouth to an unconscious or convulsing person. Get medical attention immediately.

NOTES TO PHYSICIAN: Treat symptomatically. Observe and treat for possible onset of pulmonary edema, which may be delayed.

5. FIRE FIGHTING MEASURES

FLASH POINT: 187°F (86°C) (tag closed cup)

FLAMMABLE LIMITS IN AIR - LOWER (%): Unknown

FLAMMABLE LIMITS IN AIR - UPPER (%): Unknown

EXTINGUISHING MEDIA: Large quantities of water, carbon dioxide, dry chemical powder or appropriate foam.

SPECIAL FIREFIGHTING PROCEDURES: Emits toxic fumes under fire conditions. Fire-fighters must wear NIOSH approved pressure demand, self-contained breathing apparatus and full protective clothing when fighting chemical fires. Cool exposed drums with water to avoid rupture and spread of fire.

6. ACCIDENTAL RELEASE MEASURES**ACTION TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:**

Immediately evacuate the area. Remove sources of ignition. Provide maximum ventilation. Unprotected personnel should move upwind of spill. Only personnel equipped with proper respiratory and eye/skin protection should be permitted in the area. Dike area with soil or sand to contain spill. Carefully and slowly spread soda ash (sodium carbonate) or lime over area of spill, for neutralization. Recover neutralized material on adsorbents, such as sand or vermiculite, and sweep into closed

containers for disposal. After all visible traces of spilled material have been removed, flush area with large amounts of water. Do not flush to sewer. Remove respiratory and skin/eye protection only after vapors have been cleared from the area.

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN DURING HANDLING AND STORAGE:

Store in a cool, dry, well-ventilated place. Wear appropriate personal protective equipment. Keep away from heat, sparks, flames, direct sunlight, and other sources of heat, including lighted tobacco products. Store only in closed, properly labeled containers. Keep container closed when not in use. Use or transfer in a closed system to avoid release of vapors. Vapors react with moist air to form toxic, corrosive gases. When opening drum, loosen closure carefully to relieve possible internal pressure. Contamination may cause violent decomposition. Avoid excessive heat, moisture, water, acids, alkalies, alcohol, amines, dirt, iron, metal salts, rust, activated carbon, or other chemicals.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits:

8-hour Time Weighted Average (TWA); 15-minute Short-Term Exposure Limit (STEL)

OSHA: No occupational exposure limits have been established by OSHA. NOTE: The OSHA exposure limit for phosgene is 0.1 ppm TWA.

(IPEL): 1 ppm TWA. 5 ppm STEL. NOTE: The IPEL for phosgene is 0.3 ppm STEL.

RESPIRATORY PROTECTION: Use NIOSH approved airline respirator with full facepiece or self-contained breathing apparatus operated in the pressure-demand mode for routine work purposes when the material is open to the atmosphere. The respiratory use limitations made by NIOSH or the manufacturer must be observed. Respiratory protection programs must be in accordance with 29 CFR 1910.134.

VENTILATION: Use local exhaust sufficient to minimize employee exposure. All ventilation must be exhausted away from work area. Process vents should be exhausted through neutralization and/or destructing devices.

EYE AND FACE PROTECTION: Splashproof goggles and faceshield when full facepiece breathing apparatus is not worn.

PROTECTIVE GLOVES: Butyl rubber. Silver Shield®.

OTHER PROTECTIVE EQUIPMENT: Boots, aprons, or chemical suits should be used when necessary to prevent skin contact. Personal protective clothing and use of equipment must be in accordance with 29 CFR 1910.132 (general requirements), .133 (eye and face protection), and .138

(hand protection).

9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: 208°F @ 20 mm Hg
VAPOR DENSITY (Air=1): >1
SPECIFIC GRAVITY (Water=1): 0.9914 @ 20/4°C
pH: Acidic
FREEZING/MELTING POINT: NA
SOLUBILITY (wt.% in water): Slightly (Decomposes)
BULK DENSITY: 8.26 lbs./gal.
VOLUME % VOLATILE: 100
VAPOR PRESSURE: 1 mm Hg @ 45°C
EVAPORATION RATE: <1 (water=1)
HEAT OF SOLUTION: Exothermic
PHYSICAL STATE: Liquid
ODOR: Pungent, irritating.
COLOR: Clear/Colorless

10. STABILITY AND REACTIVITY

STABILITY: Stable at normal storage temperatures

HAZARDOUS POLYMERIZATION: Will not occur.

INCOMPATIBILITY (CONDITIONS/MATERIALS TO AVOID):

Excessive heat, moisture, water, acids, alkalis, alcohol, amines, dirt, iron, metal salts, rust, activated carbon, or other chemicals.

HAZARDOUS THERMAL DECOMPOSITION/COMBUSTION PRODUCTS:

Hydrogen chloride gas. Ethylhexyl alcohol.

11. TOXICOLOGICAL INFORMATION

ACUTE INHALATION LC50: .. >3.44 mg/l (rat) Slight to very low toxicity.
ACUTE DERMAL LD50: >3038 mg/kg (rabbit) Slight to very low toxicity.
SKIN IRRITATION: Mildly irritating.
EYE IRRITATION: Mildly irritating.
ACUTE ORAL LD50: 3038 mg/kg (rat) Moderate toxicity.

CHRONIC EFFECTS/CARCINOGENICITY: This product is NOT listed as a carcinogen or suspected carcinogen by NTP, IARC, or OSHA.

MEDICAL CONDITIONS AGGRAVATED: None known.

EFFECTS OF OVEREXPOSURE:

ACUTE:

Inhalation: In the inhalation LC50 study, none of the test animals died at a dose level of 3.44 mg/l, which was the highest attainable vapor concentration. This indicates the material is not a likely hazard by vapor inhalation.

Even though inhalation toxicity data indicates that 2-EHCF does not appear to be a serious hazard by inhalation, excessive or repeated inhalation of vapors or mists would be expected to cause moderate to severe irritation of the respiratory tract and mucous membranes.

Eye/Skin: 2-ethylhexyl chloroformate is classified as a mild irritant to eyes and skin. If contact is excessive or prolonged, severe irritation can result, especially if 2-EHCF is trapped on the skin, such as under or inside clothing.

Ingestion: Although ingestion of 2-EHCF is not likely to occur in industrial applications, accidental swallowing can cause illness and irritation of the gastrointestinal tract.

CHRONIC:

The effects of long-term, low level exposures to this product have not been determined. Safe handling of this material on a long-term basis should emphasize the avoidance of all effects from repetitive acute exposures.

The toxicological properties of 2-EHCF have not yet been fully investigated.

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION:

Fish, LC50 (Lethal Concentration):

Bluegill, 1.3 (0.78-2.2) mg/l, 96-hour, moderately toxic.

Water Flea, 2.7 (2.3-3.3) mg/l, 48-hour, moderately toxic.

Sheephead Minnow, 1.6 mg/l, 96-hour, moderately toxic.

Mysid Shrimp, 1.1 mg/l, 96-hour, moderately toxic.

Freshwater Alga, >4.0 mg/l EC50, 96-hour, moderately toxic.

Marine Alga, 0.082 mg/l EC50, 96-hour, highly toxic.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD:

2-Ethylhexyl Chloroformate 10/06/1998

Dispose of neutralized waste in an approved hazardous waste management facility. Care must be taken when using or disposing of chemical materials and/or their containers to prevent environmental contamination. It is your duty to dispose of the chemical materials and/or their containers in accordance with the Clean Air Act, the Clean Water Act, the Resource Conservation and Recovery Act, as well as any other relevant Federal, State, or local laws/regulations regarding disposal.

14. TRANSPORT INFORMATION**USA DOT DESCRIPTION:**

Proper Shipping Name: 2-Ethylhexyl Chloroformate
Hazard Class: 6.1 (Toxic)
Subsidiary Risk: 8 (Corrosive).
Identification Number: UN2748
Packing Group: II

15. REGULATORY INFORMATION

USA TSCA: This product is listed on the TSCA Inventory.

EUROPE EINECS: This product is listed on EINECS.

CANADA DSL: This product is listed on the Canadian NDSL, but not the DSL.

AUSTRALIA AICS: This product is listed on AICS.

KOREA ECL: This product is listed on ECL.

JAPAN MITI (ENCS): This product is listed on MITI.

SARA TITLE III:

SARA (311, 312) Hazard Class: Acute Health Hazard. Reactive Hazard.

SARA (313) Chemicals: Not listed.

SARA Section 302: Not listed as an Extremely Hazardous Substance.

16. OTHER INFORMATION

The following has been revised since the last issue of this MSDS:

Date. Edition. MSDS has been reformatted into 16 sections. Gloves updated in Section 8.

Previous revision date: 10/26/1995

Previous edition number: 010

NA = Not Available

Material Safety Data Sheet

Page : 1

Original Date: 05/21/1992

Revision Date: 01/29/2000

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BY: _____

EMERGENCY TELEPHONE:

(800)

BOTH NUMBERS ARE AVAILABLE DAYS, NIGHTS, WEEKENDS, & HOLIDAYS.

SECTION 1 - PRODUCT INFORMATION

2-ETHYL HEXYL CHLOROFORMATE

Product ID:

Common Chemical Name:

Carbonylchloridic Acid, 2-Ethylhexyl Ester

Synonyms:

2-Ethylhexylchloroformate

Molecular Formula:

C(9)H(17)O(2)Cl(2)

Chemical Family: Chloroformates

Molecular wt.: 192.7

SECTION 2 - INGREDIENTS

Chemical Name:	CAS	Amount
2-Ethylhexylchloroformate	24468-13-1	98.0 %
SHR, EXP. LIMIT	TWA	0.1 PPM

SECTION 3 - PHYSICAL PROPERTIES

Color:	Colorless				
Form/Appearance:	Liquid				
Odor:	SHARP				
Odor Intensity:	Strong	Typical	Low/High	D.O.M.	
Specific Gravity:	0.998				
pH:	NOW AVAILABLE				
Boiling Pt:	Typical	Low/High	Deg.	e	Pressure
Freezing Pt:	NOW AVAILABLE				
Decomp. Temp:	< -55		C	760	MM HG
	> 120		C	760	MM HG
Solubility in Water:	Description: Reacts with water				
Vapor Pressure:	0.4	MM HG	X	20	DEG. C XX

SECTION 4 - FIRE AND EXPLOSION DATA

	Typical	Low/High	Deg.	Method
Flash Point:	87		C	DIN 51 758
Autoignition:	215		C	DIN 51794

2-ETHYL HEXYL CHLOROFORMATE

Page : 2

SECTION 4 - FIRE AND EXPLOSION DATA (cont)

Extinguishing Media:

Use alcohol foam, CO₂ or dry chemical extinguishing media.

Fire Fighting Procedures:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear. Avoid use of water for fire fighting.

Unusual Hazards:

There are no known unusual fire or explosion hazards.

SECTION 5 - HEALTH EFFECTS

Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquified gases.

Toxicology Test Data:

- Rabbit, Eye Irritation (unirised) - Corrosive
- Rabbit, Primary Skin Irritation - Corrosive
- Rat, Inhalation Safety Screen - Death: Prolonged Exposure: 20 Deg C
- Rat, Oral LD50 - 5420 MG/KG
- Slightly Toxic
- Rat, 4 hr Inhalation LC50 - 0.27 MG/L
- Extremely Toxic

Acute Overexposure Effects:

Contact with the eyes and skin may result in mild irritation. Inhalation overexposure may result in difficult breathing, prostration, convulsions, delayed pulmonary edema and death. This material is highly toxic by inhalation.

Chronic Overexposure Effects:

There are no known chronic effects associated with this material.

First Aid Procedures - Skin:

Wash affected areas with soap and water. Remove and launder contaminated clothing before reuse. If irritation develops, get medical attention.

First Aid Procedures - Eyes:

Immediately rinse eyes with running water for 15 minutes. If irritation develops, get medical attention.

First Aid Procedures - Ingestion:

If swallowed, dilute with water and immediately induce vomiting. Never give fluids or induce vomiting if the victim is unconscious or having convulsions. Get immediate medical attention.

First Aid Procedures - Inhalation:

Move to fresh air. Aid in breathing, if necessary, and get immediate medical attention.

First Aid Procedures - Notes to Physicians:

Not applicable.

First Aid Procedures - Aggravated Medical Conditions:

No data is available which addresses medical conditions that are associated with this product.

2-ETHYL HEXYL CHLOROFORMATE

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SECTION 5 - HEALTH EFFECTS (cont)

Please refer to the effects of overexposure section for effects observed in animals.

First Aid Procedures - Special Precautions:
Not applicable.

SECTION 6 - REACTIVITY DATA

Stability Data:

Stable

Incompatibility:

Water and nucleophiles.

Conditions/Hazards to Avoid:

See Reactivity - Incompatibility section.

Hazardous Decomposition/Polymerization:

Hazardous Decomposition Products: HCl and phosgene.

Polymerization: Does not occur.

Corrosive Properties: --

Not corrosive.

Oxidizer Properties:

Not an oxidizer

SECTION 7 - PERSONAL PROTECTION

Clothing:

Gloves, coveralls, apron, boots as necessary to minimize contact.

Eyes:

Chemical goggles; also wear a face shield if splashing hazard exists.

Respiration:

If vapors or mists are generated, wear a NIOSH/MSHA approved organic vapor/mist respirator or an air-supplied respirator as appropriate.

Ventilation:

Use local exhaust to control vapors/mists.

Explosion Proofing: :

See Section 4 - Fire and Explosion Data.

Other Personal Protection Data:

Eyewash fountains and safety showers must be easily accessible.

Shower after handling.

SECTION 8 - SPILL-LEAK/ENVIRONMENTAL

General:

Spills should be contained, solidified and placed in suitable containers for disposal in a RCRA licensed facility. This material is RCRA hazardous due to its properties.

Waste Disposal:

Incinerate or bury in a RCRA licensed facility. Do not discharge into waterways or sewer systems without proper authority.

Container Disposal:

Empty containers with less than 1 inch of residue may be landfilled at a licensed facility. Recommend crushing or other means to prevent unauthorized reuse. Other containers must be disposed of in a RCRA licensed facility.

Environmental Toxicity Test Data:

2-ETHYL HEXYL CHLOROFORMATE

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SECTION 8 - SPILL-LEAK/ENVIRONMENTAL (cont)

Moderately Toxic

SECTION 9 - STORAGE AND HANDLING

General:

Store materials to avoid sources of ignition and excessive heat.

Other Storage and Handling Data:

Consult other sections of this MSDS for information on reactivity and flammability.

SECTION 10 - REGULATORY INFORMATION

TSCA Inventory Status

Listed on Inventory: YES

RCRA Haz. Waste No.: D002

CERCLA: NO Reportable Qty.: (If YES)

The RCRA hazardous waste number D002 refers to this material's RCRA hazardous waste characteristic of corrosivity.

State Regulatory Information: (By Component)

NJ/PA/MA RTK

CAS: 24468-13-1

YES

NAME: 2-Ethylhexylchloroformate

Hazard Ratings:

	Health:	Fire:	Reactivity:	Special:
HMIS	3	2	0	HA
NFPA	3	2	0	HA

this product is hazardous or contains components which are hazardous according to the OSHA Hazard Communication Standard.

SECTION 11 - TRANSPORTATION INFORMATION

DOT Proper Shipping Name:

SEE BELOW

DOT Technical Name:

SEE BELOW

DOT Primary Hazard Class:

SEE BELOW

DOT Secondary Hazard Class:

SEE BELOW

DOT Label Required:

SEE BELOW

DOT Placard Required:

SEE BELOW

DOT Poison Constituent:

SEE BELOW

Commodity Codes: NA NA UN/NA Code: 2748 S/R Guide:

Bill of Lading Description:

2-ETHYLHEXYLCHLOROFORMATE. 6.1, (8), UN2748, PGII

*IMPORTANT: WHILE THE DESCRIPTIONS, DESIGNS, DATA AND INFORMATION

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HEXYL CHLOROPHOSPHATE

SECTION 12 - TRANSPORTATION INFORMATION (cont)

CONTAINED HEREIN ARE PRESENTED IN GOOD FAITH AND BELIEVED TO BE ACCURATE. IT IS PROVIDED FOR YOUR GUIDANCE ONLY. BECAUSE MANY FACTORS MAY AFFECT PROCESSING OR APPLICATION/USE, WE RECOMMEND THAT YOU MAKE TESTS TO DETERMINE THE SUITABILITY OF A PRODUCT FOR YOUR PARTICULAR PURPOSE PRIOR TO USE. NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE. FURTHER, YOU EXPRESSLY UNDERSTAND AND AGREE THAT THE DESCRIPTIONS, DESIGNS, DATA, AND INFORMATION FURNISHED BY HEREUNDER ARE GIVEN GRATIS AND ASSUMES NO OBLIGATION OR LIABILITY FOR THE DESCRIPTION, DESIGNS, DATA AND INFORMATION GIVEN OR RESULTS OBTAINED, ALL SUCH BEING GIVEN AND ACCEPTED AT YOUR RISK.

END OF DATA SHEET