Rhodia

Material Safety Data Sheet

DURAPHOS 2EHAPO4 (2-ETHYLHEXYL ACID PHOSPHATE)

Date Prepared: 1/31/07 **Supersedes Date: 6/04/04**

1. PRODUCT AND COMPANY IDENTIFICATION

RHODIA INC.
RHODIA NOVECARE
CN7500
8 Cedar Brook Drive
Cranbury NJ 08512-7500

Emergency Phone Numbers:
FOR EMERGENCIES INVOLVING A SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT CONTACT: CHEMTREC (800-424-9300 within the United States or 703-527-3887 for international collect calls) or Rhodia CAERS (Communication and Emergency Response System) at 800-916-3232.

For Product Information:
(888) 776-7337

Chemical Name or Synonym:
2-ETHYLHEXYL ACID PHOSPHATE; ORGANIC ACID PHOSPHATE

Molecular Formula:
$C_8H_{19}O_4P$ / $C_{16}H_{35}O_4P$

2. HAZARDS IDENTIFICATION

A. EMERGENCY OVERVIEW:

Physical Appearance and Odor:
pale yellow / liquid, characteristic odor.

Warning Statements:
DANGER! CORROSIVE. CAUSES BURNS. RISK OF SERIOUS DAMAGE TO EYES.

B. POTENTIAL HEALTH EFFECTS:

Acute Eye:
Corrosive. Causes tissue destruction, permanent damage to the cornea, blindness.

Acute Skin:
Causes irritation, burns.

Acute Inhalation:
Mists may cause lung irritation, shortness of breath, fluid in lungs.

Acute Ingestion:
Can cause nausea, vomiting, diarrhea, corrosion, burns to mouth and esophagus, abdominal pain, chest pain, shortness of breath, seizures, death.

Chronic Effects:
This product does not contain any ingredient designated by IARC, NTP, ACGIH or OSHA as probable or suspected human carcinogens.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Reg Number	OSHA Hazard	% WT/WT
PHOSPHORIC ACID, BIS(2-ETHYLHEXYL) ESTER	298-07-7	Y	55 - 70
PHOSPHORIC ACID, MONO(2-ETHYLHEXYL) ESTER	1070-03-7	Y	30 - 42

4. FIRST AID MEASURES

FIRST AID MEASURES FOR ACCIDENTAL:

Eye Exposure:
Hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes. Seek immediate medical attention, preferably with an ophthalmologist. If the physician is not immediately available, eye irrigation should be continued for an additional 15 minutes. If it is necessary to transport the patient to a physician and the eye needs to be bandaged, use a dry sterile cloth pad and cover both eyes.

Skin Exposure:
Immediately wipe excess material off skin with a dry cloth; then wash skin with plenty of soap and water for at least 15 minutes. Seek medical attention. Remove contaminated clothing and shoes while washing. Clean contaminated clothing and shoes before re-use or discard if they cannot be thoroughly cleaned.

Inhalation:
Remove victim from immediate source of exposure and assure that the victim is breathing. If breathing is difficult, administer oxygen, if available. If victim is not breathing, administer CPR (cardio-pulmonary resuscitation). Seek immediate medical attention.

Ingestion:
If victim is conscious and alert, give 2-3 glasses of water to drink and do not induce vomiting. Seek immediate medical attention. Do not leave victim unattended. To prevent aspiration of swallowed product, lay victim on side with head lower than waist. Vomiting may occur spontaneously. If vomiting occurs and the victim is conscious, give water to further dilute the chemical.

MEDICAL CONDITIONS POSSIBLY AGGRAVATED BY EXPOSURE:
Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis. Skin contact may aggravate existing skin disease.

NOTES TO PHYSICIAN:
All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

This material is an acid. The primary toxicity of this product is due to its irritant effects on mucous membranes.

INHALATION: If cough or shortness of breath occurs, evaluate the possibility of bronchitis or pneumonitis. Chest x-ray and arterial blood gases can be used to determine the presence of pulmonary edema. In severe cases, use of humidified oxygen and assisted ventilation including positive end expiratory pressure (PEEP) may be needed. Parenteral steroids may be useful in limiting the extent of pulmonary damage.

SKIN: Wash exposed area thoroughly with soap and water. Chemical burns from strong acids are generally treated the same as thermal burns.

EYES: Irrigate eyes for 15 minutes with sterile saline. If irritation, pain, swelling, photophobia or lacrimation persist, examination by an ophthalmologist is recommended.

INGESTION: If not already performed by first aid personnel, irrigate mouth with large amounts of water and dilute the acid by having victim drink 4 to 8 ounces of water or milk. DO NOT induce vomiting. Use of gastric lavage is controversial. The advantage of removal of acid must be weighted against the risk of perforation or bleeding. If a large amount of acid (> 1 ml/kg body weight) has been recently ingested, cautious gastric lavage is generally advised if the patient is alert and there is little risk of convulsions. Consultation with a gastroenterologist and/or surgeon is advised. Serious complications such as perforation or stricture of the esophagus may occur requiring care by specialists. Laryngeal edema may develop requiring intubation or tracheostomy.

5. FIRE FIGHTING MEASURES

FIRE HAZARD DATA:

Flash Point:
96 C (204 F). Flammability Class: WILL BURN.

Method Used:
Setaflash Closed Cup

Flammability Limits (vol/vol%):	**Lower:**	**Upper:**
	No Data	No Data

Extinguishing Media:
Not combustible. Use extinguishing method suitable for surrounding fire.

Special Fire Fighting Procedures:
Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing. Keep unnecessary people away, isolate hazard area and deny entry. Evacuate residents who are downwind of fire. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later. Persons who may have been exposed to contaminated smoke should be immediately examined by a physician and checked for symptoms of poisoning. The symptoms should not be mistaken for heat exhaustion or smoke inhalation.

Unusual Fire and Explosion Hazards:
Not combustible.

Hazardous Decomposition Materials (Under Fire Conditions):
oxides of phosphorus
oxides of carbon

6. ACCIDENTAL RELEASE MEASURES

Evacuation Procedures and Safety:
Wear appropriate protective gear for the situation. See Personal Protection information in Section 8.

Containment of Spill:
Dike or retain dilution water or water from firefighting for later disposal. Follow procedure described below under Cleanup and Disposal of Spill.

Cleanup and Disposal of Spill:
Exercise caution during neutralization as considerable heat may be generated. Carefully neutralize spill with soda ash. Clean up residual material by washing area with water.

Environmental and Regulatory Reporting:
Runoff from fire control or dilution water may cause pollution. Large spills should be handled according to a predetermined plan. For assistance in developing a plan contact the Technical Service Department using the Product Information phone number in Section 1.

7. HANDLING AND STORAGE

Minimum/Maximum Storage Temperatures:
Not Available

Handling:
Do not get on skin or in eyes. Avoid breathing vapors and mists. Do not ingest. This product reacts violently with bases liberating heat and causing spattering.

Storage:
Store in an area that is cool, dry, well-ventilated.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Introductory Remarks:
These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. While developing safe handling procedures, do not overlook the need to clean equipment and piping systems for maintenance and repairs. Waste resulting from these procedures should be handled in accordance with Section 13: Disposal Considerations.

Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers.

Exposure Guidelines:
No exposure limits were found for this product or any of its ingredients.

Engineering Controls:
Where engineering controls are indicated by use conditions or a potential for excessive exposure exists, the following traditional exposure control techniques may be used to effectively minimize employee exposures: local exhaust ventilation at the point of generation.

Respiratory Protection:

When respirators are required, select NIOSH/MSHA approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industrial recommendations.

Eye/Face Protection:
Eye and face protection requirements will vary dependent upon work environment conditions and material handling practices. Appropriate ANSI Z87 approved equipment should be selected for the particular use intended for this material.

Eye contact should be prevented through use of chemical safety glasses with side shields or splash proof goggles. An emergency eye wash must be readily accessible to the work area. Face contact should be prevented through use of a face shield.

Skin Protection:
Skin contact should be prevented through use of suitable protective clothing, gloves and footwear, selected with regard for use conditions and exposure potential. Consideration must be given both to durability as well as permeation resistance.

Work Practice Controls:
Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material:

(1) Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.
(2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.
(3) Wash exposed skin promptly to remove accidental splashes or contact with this material.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical properties here represent typical properties of this product. Contact the business area using the Product Information phone number in Section 1 for its exact specifications.

Physical Appearance:
pale yellow / liquid.

Odor:
characteristic odor.

pH:
3 at 1 wt/wt%.

Specific Gravity:
1.07 at 15 C (59 F).

Density:
1.07 g/ml at 15 C (59 F).

Water Solubility:
practically insoluble

Melting Point Range:
Not Available

Boiling Point Range:
Not Available

Vapor Pressure:
Not Available

Vapor Density:
Not Available

Viscosity:
viscosity (milliPascals seconds) : 57 mPa.s at 38 C (100 F).

Molecular Weight:
210.5 to 322.5

10. STABILITY AND REACTIVITY

Chemical Stability:
This material is stable under normal handling and storage conditions described in Section 7.

Conditions To Be Avoided:
heat

Materials/Chemicals To Be Avoided:
strong bases
strong oxidizing agents

The Following Hazardous Decomposition Products Might Be Expected:

Decomposition Type: thermal
oxides of phosphorus
oxides of carbon

Hazardous Polymerization Will Not Occur.

Avoid The Following To Inhibit Hazardous Polymerization:
not applicable

11. TOXICOLOGICAL INFORMATION

Acute Eye Irritation:
The following data are for similar or related products.
Toxicological Information and Interpretation:
Severely irritating. Corrosive.

Acute Skin Irritation:
The following data is for similar or related products.
Toxicological Information and Interpretation:
Corrosive.

Acute Dermal Toxicity:
The following data is for similar or related products.

Toxicological Information and Interpretation:
LD50 - lethal dose 50% of test species, 8000 mg/kg, rabbit.

Acute Respiratory Irritation:
No test data found for product.

Acute Inhalation Toxicity:
No test data found for product.

Acute Oral Toxicity:
The following data is for similar or related products.
Toxicological Information and Interpretation:
LD50 - lethal dose 50% of test species, 3000 mg/kg, rat.

Chronic Toxicity:
This product does not contain any substances that are considered by OSHA, NTP, IARC or ACGIH to be "probable" or "suspected" human carcinogens.

No additional test data found for product.

12. ECOLOGICAL INFORMATION

Ecotoxicological Information:
Chemical Fate Information: No specific biodegradation test data located. While acidity of this material is readily reduced in natural waters, the resulting phosphate may persist indefinitely or incorporate into biological systems.

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No specific biodegradation test data located. While acidity of this material is readily reduced in natural waters, the resulting phosphate may persist indefinitely or incorporate into biological systems.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method:
Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Please be advised that state and local requirements for waste disposal may be more restrictive or otherwise different from federal laws and regulations. Consult state and local regulations regarding the proper disposal of this material. Please contact technical service support at the phone number in section one of this MSDS to obtain suggestions for proper disposal of this product.

EPA Hazardous Waste - YES

EPA RCRA HAZARDOUS WASTE CODES:
"C" Corrosive.

14. TRANSPORT INFORMATION

Transportation Status: IMPORTANT! Statements below provide additional data on listed DOT

classification.
The listed Transportation Classification does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptors.

US DOT:
Hazard Class..... 8
Shipping Name:
CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
Technical Shipping Name:
(2-ETHYLHEXYL ACID PHOSPHATE)
ID Number..... UN3265
Packing Group.... III
Labels..... CORROSIVE
Emergency Guide #.... 153

TDG:
Hazard Class..... 8
Shipping Name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
Technical Shipping Name: (2-ETHYLHEXYL ACID PHOSPHATE)
ID Number..... UN3265
Packing Group.... III

IMO:
Hazard Class..... 8
Shipping Name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
Technical Shipping Name: (2-ETHYLHEXYL ACID PHOSPHATE)
ID Number..... UN3265
Packing Group.... III

IATA:
Hazard Class..... 8
Shipping Name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
Technical Shipping Name: (2-ETHYLHEXYL ACID PHOSPHATE)
ID Number..... UN3265
Packing Group.... III

15. REGULATORY INFORMATION

Inventory Status

Inventory	Status
UNITED STATES (TSCA)	Y
CANADA (DSL)	Y
EUROPE (EINECS/ELINCS)	Y
AUSTRALIA (AICS)	Y
JAPAN (MITI)	Y
SOUTH KOREA (KECL)	Y

Y = All ingredients are on the inventory.
E = All ingredients are on the inventory or exempt from listing.
P = One or more ingredients fall under the polymer exemption or are on the no longer polymer list. All other ingredients are on the inventory or exempt from listing.
N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing.

FEDERAL REGULATIONS

Inventory Issues:
All functional components of this product are listed on the TSCA Inventory.

SARA Title III Hazard Classes:

Fire Hazard	- NO
Reactive Hazard	- NO
Release of Pressure	- NO
Acute Health Hazard	- YES
Chronic Health Hazard	- NO

OTHER FEDERAL REGULATIONS:

FDA Status:
This product meets the compositional requirements of:
21 CFR 182.1073 PHOSPHORIC ACID

STATE REGULATIONS:
This product does not contain any components that are regulated under California Proposition 65.

16. OTHER INFORMATION

National Fire Protection Association Hazard Ratings--NFPA(R):

3	Health Hazard Rating--Serious
1	Flammability Rating--Slight
1	Instability Rating--Slight

National Paint & Coating Hazardous Materials Identification System--HMIS(R):

3	Health Hazard Rating--Serious
1	Flammability Rating--Slight
1	Reactivity Rating--Slight

Reason for Revisions:
Change and/or addition made to Warning Statements in Section 3, Section 11, Regulatory Review and Update.

Key Legend Information:
ACGIH - American Conference of Governmental Industrial Hygienists
OSHA - Occupational Safety and Health Administration
TLV - Threshold Limit Value
PEL - Permissable Exposure Limit
TWA - Time Weighted Average
STEL - Short Term Exposure Limit
NTP - National Toxicology Program
IARC - International Agency for Research on Cancer
ND - Not determined
RHODIA - Rhodia Established Exposure Limits

Disclaimer:
The information herein is given in good faith but no warranty, expressed or implied, is made.

**** End of MSDS Document ****