



Material Safety Data Sheet

PROBREAK 4

Date Prepared: 9/20/06

Supersedes Date: 8/20/03

1. PRODUCT AND COMPANY DESCRIPTION

RHODIA INC.
RHODIA NOVE CARE
CN 7500
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:

(800) 973-7873

Chemical Name or Synonym:

HEMICELLULASE ENZYME SOLUTION

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Reg Number	OSHA Hazard	Percentage
SUCROSE	57-50-1	Y	46
ETHYLENE GLYCOL	107-21-1	Y	< 14

3. HAZARDS IDENTIFICATION

A. EMERGENCY OVERVIEW:

Physical Appearance and Odor:

amber thin liquid, odorless.

Warning Statements:

HARMFUL IF INHALED OR SWALLOWED. CAN ADVERSELY AFFECT THE KIDNEYS, LIVER, NERVOUS SYSTEM, REPRODUCTIVE HAZARD.

B. POTENTIAL HEALTH EFFECTS:

Acute Eye:
Slightly irritating.

Acute Skin:
Essentially non-irritating. May cause slight transient irritation.

Acute Inhalation:
Mists may cause headache, dizziness, nausea, upper respiratory tract irritation.

Acute Ingestion:
May be harmful if swallowed.

Chronic Effects:
Based on similar materials, prolonged contact may cause kidney damage, permanent heart damage, chronic brain damage.

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 medical attention if irritation develops or persists or if visual changes occur.

Skin Exposure:
In case of contact, immediately wash 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 medical attention.

Ingestion:
If victim is conscious and alert, give 1-2 glasses of water to drink. Do not give anything by mouth to an unconscious person. Seek medical attention. Do not leave victim unattended.

MEDICAL CONDITIONS POSSIBLY AGGRAVATED BY EXPOSURE:
No specific information found.

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.

5. FIRE FIGHTING MEASURES

FIRE HAZARD DATA:

Flash Point:
> 93 C (200 F). Flammability Class: WILL BURN.

Method Used:
Setaflash Closed Cup

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

Extinguishing Media:
Recommended (small fires): carbon dioxide, dry chemical, Recommended (large fire): aqueous foam, water.

Special Fire Fighting Procedures:
Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing.

Unusual Fire and Explosion Hazards:
Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.

Hazardous Decomposition Materials (Under Fire Conditions):
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 spill using absorbent or impervious materials such as earth, sand or clay.

Cleanup and Disposal of Spill:
Absorb with an inert absorbent. Clean up residual material by washing area with water.

Environmental and Regulatory Reporting:
Prevent material from entering public sewer system or any waterways. Spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.

7. HANDLING AND STORAGE

Minimum/Maximum Storage Temperatures:
Not Available

Handling:
Do not breathe vapors. Do not get on skin or in eyes.

Storage:
Store in closed containers.

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:

Exposure limits represent regulated or recommended worker breathing zone concentrations measured by validated sampling and analytical methods, meeting the regulatory requirements. The following limits apply to this material, where, if indicated, S=skin and C=ceiling limit:

SUCROSE

	Notes	TWA	STEL
ACGIH		10 mg/cu m	
OSHA		5 mg/cu m	
OSHA		15 mg/cu m	

ETHYLENE GLYCOL

	Notes	TWA	STEL
ACGIH		100 mg/cu m	100 mg/cu m
OSHA	C	125 mg/cu m	
OSHA	C	50 ppm	

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:

amber thin liquid.

Odor:

odorless.

pH:

6 to 8 at 100 wt/wt%.

Specific Gravity:

1.26 at 25 C (77 F).

Water Solubility:

soluble

Melting Point Range:

Not Available

Boiling Point Range:

> 100 C (212 F) at 760 mmHg

Vapor Pressure:

< 20 mmHg at 20 C (68 F)

Vapor Density:

Not Available

Percent Volatiles by Volume:

48

10. STABILITY AND REACTIVITY

Chemical Stability:

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

Conditions To Be Avoided:

extreme cold
heat

Materials/Chemicals To Be Avoided:

strong oxidizing agents

The Following Hazardous Decomposition Products Might Be Expected:

Decomposition Type: thermal
oxides of carbon

Hazardous Polymerization Will Not Occur.

Avoid The Following To Inhibit Hazardous Polymerization:
not applicable

11. TOXICOLOGICAL INFORMATION

Acute Eye Irritation:
No test data found for product.

Acute Skin Irritation:
No test data found for product.

Acute Dermal Toxicity:
No test data found for product.

Acute Respiratory Irritation:
No test data found for product.

Acute Inhalation Toxicity:
No test data found for product.

Acute Oral Toxicity:
No test data found for product. Ethylene glycol has low toxicity with an LD50 in rats of 4700 mg/kg.

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. Animals studies have shown that ethylene glycol can cause reproductive disorders.

12. ECOLOGICAL INFORMATION

Ecotoxicological Information:
No data found for product.

Chemical Fate Information:
No data found for product.

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.

Container Handling and Disposal:
DO NOT REUSE CONTAINERS.

EPA Hazardous Waste - NO

14. TRANSPORTATION 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 Department of Transportation

Shipping Name:
NOT REGULATED

15. REGULATORY INFORMATION

Inventory Status

Inventory	Status
UNITED STATES (TSCA)	Y
CANADA (DSL)	Y
EUROPE (EINECS/ELINCS)	Y
AUSTRALIA (AICS)	Y
JAPAN (MITI)	E
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	- YES

SARA Extremely Hazardous Substances (EHS)/CERCLA Hazardous Substances

Ingredient
ETHYLENE GLYCOL

CERCLA/SARA RQ **SARA EHS TPQ**
5000 lbs

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):

1 Health Hazard Rating--Slight
1 Flammability Rating--Slight
0 Instability Rating--Minimal

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

1 Health Hazard Rating--Slight
1 Flammability Rating--Slight
0 Reactivity Rating--Minimal

Reason for Revisions:

Change and/or addition made to Section 3, 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 - Permissible 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 ****