



# Material Safety Data Sheet

## PERFORM STI

Date Prepared: 2/01/07

Supersedes Date: 8/09/06

### 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:**

PHOSPHONIUM CHLORIDES; THPC-UREA COPOLYMER

### 2. HAZARDS IDENTIFICATION

#### A. EMERGENCY OVERVIEW:

**Physical Appearance and Odor:**

pale straw / liquid, characteristic odor.

**Warning Statements:**

DANGER! CAUSES BURNS. CORROSIVE TO SKIN AND EYES. HARMFUL IF SWALLOWED. MAY CAUSE ALLERGIC SKIN REACTION. CONTAINS <0.99% FORMALDEHYDE FORMALDEHYDE IS A CHEMICAL WHICH CAN CAUSE CANCER. CONTAINS A MATERIAL THAT IS A POSSIBLE DEVELOPMENTAL HAZARD. MAY ADVERSELY EFFECT THE DEVELOPING FETUS (BASED ON ANIMAL STUDIES). May cause liver damage based on animal data.

#### B. POTENTIAL HEALTH EFFECTS:

**Acute Eye:**

Corrosive. Causes significant redness, burns, tearing, irreversible eye damage.

**Acute Skin:**

Corrosive. Causes irritation, burns, redness, May cause sensitization.

**Acute Inhalation:**

May cause coughing, upper respiratory tract irritation, shortness of breath.

**Acute Ingestion:**

May be harmful if swallowed. Ingestion not likely. Can cause nausea, vomiting, corrosion, burns to mouth and esophagus, chest pain.

**Chronic Effects:**

This product contains ingredients that are considered to be probable or suspected human carcinogens (see Section 11 - Chronic). In developmental toxicity studies in rabbits on related products, animals fed the related products during pregnancy produced an increase in numbers of offspring with eye and limb malformations, only at doses that also caused maternal (parental) toxicity.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Reg Number	OSHA Hazard	% WT/WT
TETRAKIS(HYDROXYMETHYL)PHOSPHONIUM CHLORIDE-UREA-AMINE COPOLYMER	359406-89-6	Y	55.0 - 65.0
FORMALDEHYDE	50-00-0	Y	< 0.99
WATER/INERTS	*****	N	

### 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:**

NEVER attempt to induce vomiting. Do not give the affected person anything to drink, even if he is fully conscious. Transport to hospital immediately.

**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.

## 5. FIRE FIGHTING MEASURES

### FIRE HAZARD DATA:

**Flash Point:**

Not Applicable

**Extinguishing Media:**

Not combustible. Use extinguishing method suitable for surrounding fire. Recommended: dry chemical, alcohol foam, water fog, carbon dioxide.

**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 nitrogen  
oxides of phosphorus  
oxides of carbon  
chloride fumes

## 6. ACCIDENTAL RELEASE MEASURES

**Evacuation Procedures and Safety:**

Wear appropriate protective gear for the situation. See Personal Protection information in Section 8. CAUTION: Spilled material may make the floor slippery. Do not leave traces of product on floors, ladders, etc., as this may present a slipping hazard.

**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:**

Recover as much liquid product as possible. Absorb with vermiculite or other inert absorbent. Shovel up into an appropriate closed container (see Section 7: Handling and Storage). Clean up residual material as appropriate. The material should be properly packaged and disposed of in compliance with applicable regulations.

**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:

Personnel handling this product should be thoroughly trained as to its hazards. Do not get on skin or in eyes. Avoid breathing vapors and mists. Do not ingest. Use only as directed.

**\*\* HAZARD WARNING:** This product belongs to a chemical family that HAS BEEN TESTED in combination with Trimethylolpropane, Trimethylolpropane derived products or their corresponding Trimethylolpropane homologs for toxicity of the thermal decomposition products in the absence of flame. Products in this chemical family PRODUCED NO SIGNIFICANT ADVERSE HEALTH EFFECTS in laboratory animals. However, there is a possibility that this thermal decomposition may produce bicyclic phosphates and/or phosphites in combination with certain other phosphorus compounds. Bicyclic phosphates and phosphites have acute neurotoxic properties and may cause convulsive seizures in laboratory test animals. Follow all precautionary measures outlined in this Material Safety Data Sheet and/or contact Rhodia Inc.

### Storage:

Store in an area that is cool, dry, well-ventilated, Store in tightly closed containers. Avoid containers other than: polyethylene, Store away from; oxidizers, reducing agents, Store in original container.

## 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:

### FORMALDEHYDE

	Notes	TWA	STEL
ACGIH			0.3 ppm
OSHA		0.75 ppm	2 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:**

pale straw / liquid.

**Odor:**

characteristic odor.

**pH:**

4.5 at 100 wt/wt%.

**Specific Gravity:**

1.31 at 20 C (68 F).

**Water Solubility:**

miscible

**Melting Point Range:**

~ -21 C (-6 F)

**Boiling Point Range:**

> 100 C (212 F) at mmHg

**Vapor Pressure:**

0 mmHg at 0 C (32 F)

**Vapor Density:**

Not Available

**Octanol/Water Partition Coefficient:**  
0.058

## 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

See HAZARD WARNING under HANDLING : in Section 7.

**Materials/Chemicals To Be Avoided:**

strong bases

strong oxidizing agents

**The Following Hazardous Decomposition Products Might Be Expected:**

**Decomposition Type: thermal**

hydrogen chloride

formaldehyde

oxides of nitrogen

oxides of phosphorus

oxides of carbon

phosphine gas

**Hazardous Polymerization Will Not Occur.**

**Avoid The Following To Inhibit Hazardous Polymerization:**

not applicable

## 11. TOXICOLOGICAL INFORMATION

**Acute Eye Irritation:**

**Toxicological Information and Interpretation:**

eye - eye irritation, rabbit. Severely irritating. This material is expected to cause significant irritation to the eyes.  
Data for a similar product.

**Acute Skin Irritation:**

**Toxicological Information and Interpretation:**

skin - sensitization, guinea pig. Moderate sensitizer Data for a similar product.

skin - skin irritation, rabbit. Corrosive. Data for a similar product.

**Acute Dermal Toxicity:**

**Toxicological Information and Interpretation:**

LD50 - lethal dose 50% of test species, > 2000 mg/kg, rat. Data for a similar product.

**Acute Respiratory Irritation:**

No test data found for product.

**Acute Inhalation Toxicity:**

No test data found for product.

**Acute Oral Toxicity:****Toxicological Information and Interpretation:**

LD50 - lethal dose 50% of test species, < 2000 mg/kg, rat. Data for a similar product.

**Chronic Toxicity:**

This product contains the substances that are considered to be "probable" or "suspected" human carcinogens as follows:

Ingredient Name	Regulatory Agency Listing Carcinogen			
	OSHA	IARC	NTP	ACGIH
FORMALDEHYDE	Yes	1	Yes	A2

Toxicological Information and Interpretation - MUTAGENICITY, Salmonella. Ames Test: Positive. (Without activation). Data for a similar product. - MUTAGENICITY, mouse. Mouse Lymphoma Positive. (With and without activation). Data for a similar product. - MUTAGENICITY, mouse. Mouse micronucleus (in vivo): Negative. Data for a similar product. Unscheduled DNA synthesis assay: Negative. - TERATOGENICITY, rabbit. In developmental toxicity studies in rabbits on related products, animals fed the related products during pregnancy produced an increase in numbers of offspring with eye and limb malformations, only at doses that also caused maternal (parental) toxicity. - SUB-CHRONIC EXPOSURE, 5 mg/kg/1 day, rat. no-effect level (NOEL) (28-day oral study). Data for a similar product.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicological Information:**

May cause adverse environmental impact if material reaches waterways.

**Ecotoxicological Information and Interpretation:**

EC50 - effective concentration 50% of test species, 0.6 mg/l/72 hr, algae.

EC50 - effective concentration 50% of test species, 6.5 mg/l/48 hr, Daphnia magna. Data for a similar product.

LC50 - lethal concentration 50% of test species, 3.8 mg/l/96 hr, rainbow trout (Oncorhynchus mykiss). Data for a similar product.

**Chemical Fate Information:**

For chemical fate data call the product information phone number listed in Section 1. The following data is for similar or related product. The material is not readily biodegradable (OECD 301E). Product is not expected to bioaccumulate.

## 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, N.O.S.

Technical Shipping Name:

TETRAKIS(HYDROXYMETHYL)PHOSPHONIUM CHLORIDE-UREA/ALKYLAMINE COPOLYMER

ID Number..... UN1760

Packing Group.... III

Labels..... CORROSIVE

Emergency Guide #.... 154

**TDG:**

Hazard Class..... 8

Shipping Name: CORROSIVE LIQUID, N.O.S.

Technical Shipping Name: TETRAKIS(HYDROXYMETHYL)PHOSPHONIUM CHLORIDE-UREA/ALKYLAMINE COPOLYMER

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ID Number..... UN1760

Packing Group.... III

**15. REGULATORY INFORMATION****Inventory Status**

Inventory	Status
UNITED STATES (TSCA)	Y
CANADA (DSL)	N
EUROPE (EINECS/ELINCS)	Y



AUSTRALIA (AICS)	N
JAPAN (MITI)	N
SOUTH KOREA (KECL)	N

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. This product is subject to limitations and/or restrictions on its use because of a Significant New Use Rule (SNUR) under TSCA. Releases to surface water from the manufacture, processing and use of this material are prohibited.

### 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	CERCLA/SARA RQ	SARA EHS TPQ
FORMALDEHYDE	100 lbs	500 lbs

### STATE REGULATIONS:

This product contains the following components that are regulated under California Proposition 65:

Ingredient Name	Cancer List	Reprod. List	No Sign. Risk Lvl (ug/day) California	RPI
FORMALDEHYDE	Y	N	40	ND

## 16. OTHER INFORMATION

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

3	Health Hazard Rating--Serious
0	Flammability Rating--Minimal
0	Instability Rating--Minimal

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

3	Health Hazard Rating--Serious
0	Flammability Rating--Minimal
0	Reactivity Rating--Minimal

### Reason for Revisions:

Change and/or addition made to Section 3, Warning Statements in Section 3, Section 11.

### 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 \*\***