

# MATERIAL SAFETY DATA SHEET



BaySystems NorthAmerica

**Baysystems North America**  
Product Safety & Regulatory Affairs  
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USA

**TRANSPORTATION EMERGENCY**  
CALL CHEMTREC: (800) 424-9300  
INTERNATIONAL: (703) 527-3887

**NON-TRANSPORTATION**  
Bayer Emergency Phone: (412) 923-1800  
Bayer Information Phone: (800) 662-2927

## 1. Product and Company Identification

**Product Name:** BAYSEAL 0.5  
**Material Number:** 6684092

## 2. Hazards Identification

### Emergency Overview

**WARNING! Color:** Amber, Brown **Form:** liquid **Odor:** slight, Ether, Amine.  
Use cold water spray to cool fire-exposed containers to minimize the risk of rupture.  
May cause nausea or dizziness. Causes respiratory tract irritation. Harmful if inhaled.  
Causes skin irritation. Harmful if absorbed through skin. Causes eye irritation. May  
cause a temporary fogging of the eyes. Harmful if swallowed. May cause kidney  
damage. May cause liver damage.

### Potential Health Effects

**Primary Routes of Entry:** Skin Contact, Eye Contact

**Medical Conditions Aggravated by Exposure:** Eye disorders, Respiratory disorders, Skin disorders

### HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE

#### Inhalation

##### **Acute Inhalation**

##### **For Component: Chlorinated Phosphate Ester**

May cause respiratory tract irritation with symptoms of coughing, sore throat and runny nose.

##### **For Component: Tertiary Amine**

May cause pulmonary edema with symptoms of breathing difficulty and tightness of chest. Causes respiratory tract irritation with symptoms of coughing, sore throat and runny nose.

#### **Chronic Inhalation**

##### **For Component: Tertiary Amine**

May cause pulmonary edema with symptoms of breathing difficulty and tightness of chest.

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## Skin

### **Acute Skin**

#### **For Component: Chlorinated Phosphate Ester**

May cause slight irritation.

#### **For Component: Tertiary Amine**

If sufficient amounts are absorbed, systemic toxicity may occur with symptoms similar to those described in acute inhalation. Corrosive with symptoms of reddening, itching, swelling, burning and possible permanent damage. May be harmful if absorbed through skin.

#### **For Component: 2-(2-(dimethylamino)ethoxy) Ethanol**

Corrosive with symptoms of reddening, itching, swelling, burning and possible permanent damage.

## Eye

### **Acute Eye**

#### **For Component: Chlorinated Phosphate Ester**

Not expected to be irritating.

#### **For Component: Tertiary Amine**

Corrosive with symptoms of reddening, tearing, swelling, burning and possible permanent damage.

#### **For Component: 2-(2-(dimethylamino)ethoxy) Ethanol**

Corrosive with symptoms of reddening, tearing, swelling, burning and possible permanent damage.

### **Chronic Eye**

#### **For Component: Tertiary Amine**

Prolonged vapor contact may cause conjunctivitis.

## Ingestion

### **Acute Ingestion**

#### **For Component: Chlorinated Phosphate Ester**

May be harmful if swallowed. Symptoms of ingestion may include abdominal pain, nausea, vomiting, and diarrhea. Moderately toxic by ingestion.

#### **For Component: Tertiary Amine**

Symptoms of ingestion may include abdominal pain, nausea, vomiting, and diarrhea. May be harmful if swallowed.

### **Chronic Ingestion**

#### **For Component: Chlorinated Phosphate Ester**

May cause liver damage. May cause kidney damage.

### **Carcinogenicity:**

No Carcinogenic substances as defined by IARC, NTP and/or OSHA

## **3. Composition/Information on Ingredients**

### **Hazardous Components**

<u>Weight %</u>	<u>Components</u>	<u>CAS-No.</u>
15 - 25%	Chlorinated Phosphate Ester	CAS# is a trade secret
10 - 20%	Brominated Flame Retardant	CAS# is a trade secret
1 - 5%	Tertiary Amine	CAS# is a trade secret
1 - 5%	2-(2-(dimethylamino)ethoxy) Ethanol	1704-62-7

#### 4. First Aid Measures

##### Eye Contact

In case of contact, flush eyes with plenty of water for at least 15 minutes. Call a physician immediately.

##### Skin Contact

In case of skin contact, wash affected areas with soap and water. Immediately remove contaminated clothing and shoes. Get medical attention.

##### Inhalation

If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.

##### Ingestion

If ingested, do not induce vomiting unless directed to do so by medical personnel. Get medical attention.

#### 5. Fire-Fighting Measures

**Suitable Extinguishing Media:** carbon dioxide (CO<sub>2</sub>), dry chemical, foam, water spray for large fires.

##### Special Fire Fighting Procedures

Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes. Use cold water spray to cool fire-exposed containers to minimize the risk of rupture.

#### 6. Accidental release measures

##### Spill and Leak Procedures

Cover spill with inert material (e. g., dry sand or earth) and collect for proper disposal. Use appropriate personal protective equipment during clean up. Evacuate and keep unnecessary people out of spill area.

#### 7. Handling and Storage

##### Storage Temperature:

**maximum:** 50 °C (122 °F)

##### Storage Period

6 Months

##### Handling/Storage Precautions

Handle in accordance with good industrial hygiene and safety practices. Wash thoroughly after handling. Keep container closed when not in use. Material is hygroscopic and may absorb small amounts of atmospheric moisture. If contamination with isocyanates is suspected, do not reseal containers. Do not get on skin or clothing. Do not get in eyes. Do not breathe vapours or spray mist.

## 8. Exposure Controls / Personal Protection

Country specific exposure limits have not been established or are not applicable

### Industrial Hygiene/Ventilation Measures

Under normal conditions of use, special ventilation is not required.

### Respiratory Protection

In case of insufficient ventilation wear suitable respiratory equipment.

### Hand Protection

Permeation resistant gloves.

### Eye Protection

Chemical resistant goggles must be worn., Chemical safety goggles in combination with a full face shield if a splash hazard exists.

### Skin and body protection

Permeation resistant clothing

### Additional Protective Measures

Employees should wash their hands and face before eating, drinking, or using tobacco products. Educate and train employees in the safe use and handling of this product.

## 9. Physical and chemical properties

<b>Form:</b>	liquid
<b>Color:</b>	Amber, Brown
<b>Odor:</b>	slight, Ether, Amine
<b>pH:</b>	9.5
<b>Freezing Point:</b>	Not Established
<b>Boiling Point/Range:</b>	Not Established
<b>Flash Point:</b>	> 93.33 °C (> 200 °F)
<b>Vapor Pressure:</b>	1,227 hPa
<b>Specific Gravity:</b>	approximately 1.14
<b>Solubility in Water:</b>	Partially soluble
<b>Bulk Density:</b>	approximately 9.5 lb/gal

## 10. Stability and Reactivity

### Hazardous Reactions

Hazardous polymerization does not occur.

### Stability

Stable

### Materials to avoid

oxidizing agents, Isocyanates

### Hazardous decomposition products

By Fire: Carbon Dioxide; Carbon Monoxide; other aliphatic fragments which have not been determined

## 11. Toxicological Information

### **Toxicity Data for Polyether Polyol**

#### **Acute Oral Toxicity**

LD50: > 5,000 mg/kg (Rat)

#### **Acute Inhalation Toxicity**

LC0: 2516 mg/m<sup>3</sup>, 6 hrs (Rat)

#### **Acute dermal toxicity**

LD50: > 5,000 mg/kg (rabbit)

#### **Eye Irritation**

rabbit, No eye irritation

#### **Mutagenicity**

Genetic Toxicity in Vitro:

Ames: negative

Genetic Toxicity in Vivo:

negative (Drosophila melanogaster, )

#### **Developmental Toxicity/Teratogenicity**

rat, female, oral, gestation, NOAEL (teratogenicity): 10,000 mg/kg,

No Teratogenic effects observed at doses tested.

### **Toxicity Data for Chlorinated Phosphate Ester**

#### **Acute Oral Toxicity**

LD50: 632 mg/kg (Rat)

#### **Acute Inhalation Toxicity**

LC50: > 17,800 mg/l, aerosol, 1 hrs (rat, Male/Female)

#### **Acute dermal toxicity**

LD50: > 5,000 mg/kg (rabbit, Male/Female)

#### **Skin Irritation**

Human, Patch Test, No skin irritation

rabbit, No skin irritation

#### **Eye Irritation**

rabbit, Draize, Exposure Time: 24 hrs, Mild eye irritation

rabbit, No eye irritation

#### **Sensitization**

dermal: non-sensitizer (guinea pig, Maximisation Test (GPMT))

dermal: non-sensitizer (Human, Patch Test)

#### **Repeated Dose Toxicity**

90 Days, oral: NOAEL: 36 mg/kg, (Rat, male)

#### **Mutagenicity**

Genetic Toxicity in Vitro:

Ames: negative (Salmonella typhimurium, Metabolic Activation: with/without)

Positive and negative results were reported.

Mammalian cell - gene mutation assay: positive (Mouse lymphoma cells (L5178Y/TK), Metabolic Activation: with)

Positive and negative results were reported.

**Toxicity to Reproduction/Fertility**

Other method, inhalation, daily, (rat, male)  
Reproductive effects have been observed in animal studies.

**Developmental Toxicity/Teratogenicity**

rat, female, oral, gestation, daily, NOAEL (teratogenicity): > 1%, NOAEL (maternal): > 1%  
No Teratogenic effects observed at doses tested. No fetotoxicity observed at doses tested.

**Toxicity Data for Polyether polyol**

**Eye Irritation**

rabbit, Draize Test, Exposure Time: 24 h, Moderately irritating

**Toxicity Data for Tertiary Amine**

**Acute Oral Toxicity**

LD50: 1,290 mg/kg (Rat)

**Acute Inhalation Toxicity**

LC50: > 2.63 mg/l, 1 hrs (Rat)

**Acute dermal toxicity**

LD50: 310 mg/kg (rabbit)

**Skin Irritation**

rabbit, Corrosive

**Eye Irritation**

rabbit, Corrosive

**Toxicity Data for 2-(2-(dimethylamino)ethoxy) Ethanol**

**Acute Oral Toxicity**

LD50: 2,000 - 5,000 mg/kg (rat)

**Acute dermal toxicity**

LD50: 1,000 - 2,000 mg/kg (rabbit)

**Skin Irritation**

rabbit, Corrosive

**Eye Irritation**

rabbit, Corrosive

**12. Ecological Information**

**Ecological Data for Polyether Polyol**

**Biological Oxygen Demand (BOD)**

5 Days, 6 %  
20 Days, 77 %

**Chemical Oxygen Demand (COD)**

1.84 mg/g

**Acute and Prolonged Toxicity to Fish**

LC50: > 10,000 mg/l (Fathead minnow (Pimephales promelas), 96 hrs)

**Acute Toxicity to Aquatic Invertebrates**

EC50: > 10,000 mg/l (Water flea (Daphnia magna), 48 hrs)

**Toxicity to Microorganisms**

> 5,000 mg/l, (16 hrs)

**Ecological Data for Chlorinated Phosphate Ester**

**Biodegradation**

Aerobic, 0 %, Exposure time: 28 Days, Not readily biodegradable.

**Bioaccumulation**

Carp, Exposure time: 42 Days, approximately 0.8 - 2.8 BCF

**Acute and Prolonged Toxicity to Fish**

LC50: approximately 84 mg/l (Bluegill (Lepomis macrochirus), 96 hrs)

LC50: 51 mg/l (Fathead minnow (Pimephales promelas), 96 hrs)

LC50: 30 mg/l (Guppy (Poecilia reticulata), 96 hrs)

**Acute Toxicity to Aquatic Invertebrates**

EC50: approximately 131 mg/l (Water flea (Daphnia magna), 48 hrs)

**Toxicity to Aquatic Plants**

EC50: 45 mg/l, End Point: biomass (Green algae (Scenedesmus subspicatus), 72 hrs)

EC50: 41 - 55 mg/l, End Point: biomass (Green algae (Selenastrum capricornutum), 96 h)

**Toxicity to Microorganisms**

EC50: 295 mg/l, (Photobacterium phosphoreum, 30 min)

EC50: 784 mg/l, (Activated sludge microorganisms, 3 hrs)

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5 Days, 6 %

20 Days, 77 %

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**13. Disposal considerations**

**Waste Disposal Method**

Waste disposal should be in accordance with existing federal, state and local environmental control laws.

**Empty Container Precautions**

Recondition or dispose of empty container in accordance with governmental regulations.

**14. Transportation information**

**Land transport (DOT)**

Non-Regulated

**Sea transport (IMDG)**

Non-Regulated

**Air transport (ICAO/IATA)**

Non-Regulated

**15. Regulatory Information**

**United States Federal Regulations**

**OSHA Hazcom Standard Rating:** Hazardous

**US. Toxic Substances Control Act:** Listed on the TSCA Inventory.

**US. EPA CERCLA Hazardous Substances (40 CFR 302):**

**Components**

None

**SARA Section 311/312 Hazard Categories:**

Acute Health Hazard, Chronic Health Hazard



**US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III  
Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A):**

**Components**

None

**US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III  
Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required:**

**Components**

None

**US. EPA Resource Conservation and Recovery Act (RCRA) Composite List of Hazardous Wastes  
and Appendix VIII Hazardous Constituents (40 CFR 261):**

If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

**State Right-To-Know Information**

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

**Massachusetts, New Jersey or Pennsylvania Right to Know Substance Lists:**

<u>Weight %</u>	<u>Components</u>	<u>CAS-No.</u>
>=1%	Polyether Polyol	CAS# is a trade secret
15 - 25%	Chlorinated Phosphate Ester	CAS# is a trade secret
>=1%	Water	7732-18-5
10 - 20%	Brominated Flame Retardant	CAS# is a trade secret
>=1%	Polyether polyol	68909-26-2

**MA Right to Know Extraordinarily Hazardous Substance List:**

<u>Weight %</u>	<u>Components</u>	<u>CAS-No.</u>
<0.0001 ppm		CAS# is a trade secret

**California Prop. 65:**

**Warning! This product contains chemical(s) known to the State of California to be Carcinogenic.**

<u>Weight %</u>	<u>Components</u>	<u>CAS-No.</u>
<0.0001 ppm		CAS# is a trade secret

**16. Other Information**

**NFPA 704M Rating**

<b>Health</b>	2
<b>Flammability</b>	1
<b>Reactivity</b>	0
<b>Other</b>	

0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

**HMIS Rating**

<b>Health</b>	2*
<b>Flammability</b>	1
<b>Physical Hazard</b>	0

Material Name: BAYSEAL 0.5

Article Number: 6684092

0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe  
\* = Chronic Health Hazard

The method of hazard communication for Baysystems North America is comprised of Product Labels and Material Safety Data Sheets. HMIS and NFPA ratings are provided by Baysystems North America as a customer service.

Contact Person: Product Safety Department  
Telephone: (412) 777-2835  
MSDS Number: 000000005984  
Version Date: 08/29/2007  
Report Version: 1.11

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