



MATERIAL SAFETY DATA SHEET

Spray Foam Polymers, LLC
Product Safety Group
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USA

TRANSPORTATION EMERGENCY
CALL CHEMTREC: (800) 424-9300

NON-TRANSPORTATION
Phone: (800) 853-1577

1. Product and Company Identification

Product Name: ThermoSeal 2000
Material Number: 57139823
Chemical Family: Polyol System

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.
Vapor reduces oxygen available for breathing. Causes respiratory tract irritation. Causes skin irritation. May cause a temporary fogging of the eyes. Causes eye irritation. May affect nervous system. May cause irregular heartbeat. May cause kidney damage. May cause liver damage.

Potential Health Effects

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

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

HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE

Inhalation

Acute Inhalation

For Component: Hydrofluorocarbon

May cause respiratory tract irritation with symptoms of coughing, sore throat and runny nose. May induce cardiac arrhythmia (irregular heartbeat) in some individuals. Vapor can reduce oxygen available for breathing.

For Component: Chlorinated Phosphate Ester

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

For Component: Tertiary Amine

Material Name: ThermoSeal 2000

Article Number: 57139823

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

Skin

Acute Skin

For Component: Hydrofluorocarbon

Slightly toxic by skin absorption. May cause slight irritation.

For Component: Chlorinated Phosphate Ester

May cause slight irritation.

For Component: Tertiary Amine

Toxic by skin absorption.

Chronic Skin

For Component: Tertiary Amine

Repeated and prolonged contact may cause an allergic skin reaction in sensitive individuals.

Eye

Acute Eye

For Component: Hydrofluorocarbon

May cause slight irritation.

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.

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

Corrosive to the digestive tract with symptoms of burning and ulceration.

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

Weight %

7 - 13%

5 - 10%

Components

Hydrofluorocarbon

Chlorinated Phosphate Ester

CAS-No.

460-73-1

CAS# is a trade secret

5 - 10%
1 - 5%

Brominated Flame Retardant
Tertiary Amine

CAS# is a trade secret
CAS# is a trade secret

4. First Aid Measures

Eye Contact

In case of contact, flush eyes with plenty of lukewarm water. Get medical attention if irritation develops.

Skin Contact

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

Inhalation

If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration using a pocket mask type resuscitator. 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 (CO₂), 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 fireexposed 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:

minimum: 7 °C (44.6 °F)
maximum: 29 °C (84.2 °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. Materials hygroscopic and may absorb small amounts of atmospheric moisture. If contamination with isocyanates is suspected, do not reseal containers. Avoid

contact with eyes. Avoid contact with skin or clothing. Do not breathe vapours/dust.

8. Exposure Controls / Personal Protection

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

Industrial Hygiene/Ventilation Measures

Use local and general exhaust ventilation to control levels of exposure.

Respiratory Protection

In case of insufficient ventilation wear suitable respiratory equipment.

Hand Protection

Permeation resistant gloves.

Eye Protection

Chemical safety goggles or safety glasses with side-shields.

Skin and body protection

Wear cloth work clothing including long pants and long-sleeved shirts.

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

Form:	liquid
Color:	Amber, Brown
Odor:	slight, Ether, Amine
pH:	9.6
Freezing Point:	Not Established
Boiling Point/Range:	Not Established
Vapor Pressure:	Not Established
Specific Gravity:	Not Established
Solubility in Water:	Partially soluble
Bulk Density:	Not Established

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 Hydrofluorocarbon

Acute Inhalation Toxicity

LC50: >200,000 ppm, 4 h (Rat)

Acute dermal toxicity

LD50: > 2,000 mg/kg (Rat)

Skin Irritation

rabbit, Non-irritating

Eye Irritation

rabbit, Mild eye irritation

Sensitization

non-sensitizer (Dog)

Repeated Dose Toxicity

28 d, inhalation: NOAEL: 50,000 ppm, (Rat)

90 d, Inhalation: NOAEL: 2000 ppm, (Rat)

Mutagenicity

Genetic Toxicity in Vitro:

Cytogenetic assay: ambiguous (human lymphocytes, Metabolic Activation: with/without)

Ames: negative (Metabolic Activation: with/without)

Genetic Toxicity in Vivo:

Micronucleus Assay: negative (mouse)

Developmental Toxicity/Teratogenicity

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 Tertiary Amine

Acute Oral Toxicity

LD50: 3,250 uL/kg (Rat)

LD50: 2,800 mg/kg (Rat)

Acute dermal toxicity

LD50: > 1,000 mg/kg (rabbit)

Skin Irritation

rabbit, Corrosive

12. Ecological Information

Ecological Data for Hydrofluorocarbon

Acute and Prolonged Toxicity to Fish

LC50: > 97.9 mg/l (Rainbow trout (*Salmo gairdneri*), 48 h)

Acute Toxicity to Aquatic Invertebrates

EC50: 81.8 mg/l (Water flea (*Daphnia magna*), 96 h)

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)

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)

Proper Shipping Name: Aviation regulated liquid, n.o.s. (contains Hydrofluorocarbon)

Hazard Class or Division: 9

UN-No: UN3334

Packaging Group:

Hazard Label(s): Miscellaneous

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%	Polyester Polyol	
7 - 13%	Hydrofluorocarbon	460-73-1
5 - 10%	Chlorinated Phosphate Ester	CAS# is a trade secret
5 - 10%	Brominated Flame Retardant	CAS# is a trade secret
1 - 5%	Tertiary Amine	CAS# is a trade secret

New Jersey Environmental Hazardous Substances List and/or New Jersey RTK Special Hazardous Substances Lists:

<u>Weight %</u>	<u>Components</u>	<u>CAS-No.</u>
0.1 - 1%	Ethylene Glycol	107-21-1

Pennsylvania Right to Know Special Hazard Substance List:

<u>Weight %</u>	<u>Components</u>	<u>CAS-No.</u>
<0.075%	1,4-Dioxane	123-91-1

MA Right to Know Extraordinarily Hazardous Substance List:

<u>Weight %</u>	<u>Components</u>	<u>CAS-No.</u>
<0.075%	1,4-Dioxane	123-91-1

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>
<0.075%	1,4-Dioxane	123-91-1
<5 ppb	Formaldehyde	50-00-0

16. Other Information

NFPA 704M Rating

Health	2
Flammability	1

Reactivity	0
Other	

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

HMIS Rating

Health	2*
Flammability	1
Physical Hazard	0

0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe

* = Chronic Health Hazard

The method of hazard communication for Spray Foam Polymers LLC is comprised of Product Labels and Material Safety Data Sheets. HMIS and NFPA ratings are provided by Spray Foam Polymers LLC as a customer service.

Contact Person: Product Safety Department
Telephone: (800) 853-1577
MSDS Number: 000000007402
Version Date: 06/27/2008
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