

# SAFETY DATA SHEET



## 1. Identification

Everest Systems LLC  
16601 Central Green Blvd, Ste 100  
Houston, TX 77032

### TRANSPORTATION EMERGENCY

CALL: 800-575-8966  
INTERNATIONAL: 800-575-8966

### NON-TRANSPORTATION

Emergency Phone: 832-922-2926  
Information Phone: 800-575-8966

**Product Name:** Opticell 2.0 Cured Foam  
**Chemical Family:** Polyol System  
**Use:** Cured Spray Foam Insulation

## 2. Hazards Identification

### GHS Classification

Health: 0  
Flammability: 1  
Reactivity: 0

### GHS Label Elements

Hazard pictograms:



Signal word: Danger

Hazard statements: Causes skin irritation.  
Causes serious eye damage.  
Vapors can cause temporary corneal edema with symptoms of blurred vision or the appearance of halos around bright objects.

Precautionary statements:

#### Prevention:

Wash skin and face thoroughly after handling.  
Wear eye and face protection.  
Wear protective gloves.

#### Response:

IF IN EYES: Rinse cautiously with water for several minutes.  
Remove contact lenses, if present and easy to do. Continue rinsing.  
Immediately call a doctor or emergency medical facility (i.e., 911).  
IF ON SKIN: Wash with plenty of soap and water.

If skin irritation occurs: Get medical attention.  
Take off contaminated clothing and wash before reuse.

### 3. Composition/Information on Ingredients

#### Hazardous Components

<u>WeightPercent</u>	<u>Components</u>	<u>CAS-No.</u>
40 - 70%	Polyol Blend	Proprietary
5 - 13%	Hydroflourocarbons	692-49-9
3 - 10%	Chlorinated Phosphate Ester	13674-84-5
1 - 10%	Brominated Flame Retardant	Proprietary
1 - 5%	Polyether Polyol Blend	Proprietary
1 - 5%	Diethyltoluenediamine	68479-98-1
1-5%	N,N-Dimethylcyclohexamine	98-94-2

The specific chemical identity and/or exact percentage of component(s) have been withheld as a trade secret.

#### 4. First Aid Measures

##### Most Important Symptom(s)/Effect(s)

**Acute:** Causes serious eye damage with symptoms of eye burns, corneal injury, and possible blindness., Causes skin irritation with symptoms of reddening, itching, and swelling., Vapor can reduce oxygen available for breathing., Vapors can cause temporary corneal edema with symptoms of blurred vision or the appearance of halos around bright objects.

##### Eye Contact

In case of contact, flush eyes with plenty of lukewarm water. 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 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. Firefighting Measures

**Suitable Extinguishing Media:** Carbon dioxide (CO<sub>2</sub>), Dry chemical, Foam, water spray for large fires.

**Unsuitable Extinguishing Media:** High volume water jet

##### Fire Fighting Procedure

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.

##### Hazardous Decomposition Products

By Fire: ; Carbon Dioxide; Carbon Monoxide Hydrogen cyanide, Nitrogen oxides (NO<sub>x</sub>), Amines, Hydrogen chloride gas, Hydrogen fluoride, Carbonyl halides, Oxides of phosphorus, Other hazardous decomposition products may be formed.

#### 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

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

**Storage Period:**

6 Months

**Storage Temperature**

**Minimum:** 21.11 °C (70 °F)

**Maximum:** 26.67 °C (80 °F)

**Storage Conditions**

Store materials between 70°F to 80°F (21°C to 27°C) in a dry and well ventilated area for a minimum of 48 hours prior to application of material. The transit temperature range is 32°F to 100°F (0°C to 38°C). The pressure in sealed containers can increase under the influence of heat. Protect against heat and direct sunlight.

**Substances to Avoid**

Oxidizing agents, Isocyanates

**8. Exposure Controls/Personal Protection****Exposure Limits**

Any component which is listed in section 3 and is not listed in this section does not have a known ACGIH TLV, OSHA PEL or supplier recommended occupational exposure limit.

**Personal protective equipment**

Avoid contact with skin, eyes and clothing.

**Industrial Hygiene/Ventilation Measures**

When handling this product, ventilation of the work area is recommended.

**Respiratory Protection**

In case of insufficient ventilation, wear suitable respiratory equipment., In spray applications, an organic vapor/particulate respirator or air supplied unit is necessary.

**Hand Protection**

When this product is sprayed in combination with polymeric MDI ("A" side), fabric gloves coated in nitrile, neoprene, butyl or PVC are recommended. When handling liquid product, nitrile, neoprene, butyl or PVC gloves are recommended.

**Eye Protection**

Chemical resistant goggles must be worn.

**Skin Protection**

Wear as appropriate:, disposable one-piece overall with integral hood, Impervious protective 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**

**State of Matter:** liquid  
**Color:** Amber, Brown  
**Odor:** slight, Ether, Amine  
**Odor Threshold:** No Data Available

<b>pH:</b>	7-10
<b>Freezing Point:</b>	No Data Available
<b>Setting Point:</b>	No Data Available
<b>Melting Point:</b>	No Data Available
<b>Boiling Point:</b>	No Data Available
<b>Flash Point:</b>	>120° C / 248° F
<b>Evaporation Rate:</b>	No Data Available
<b>Lower explosion limit:</b>	No Data Available
<b>Upper Explosion Limit:</b>	No Data Available
<b>Vapor Pressure:</b>	No Data Available
<b>Vapor Density:</b>	>5
<b>Density:</b>	No Data Available
<b>Relative Vapor Density:</b>	1.15 – 1.3
<b>Specific Gravity:</b>	1.06
<b>Solubility in Water:</b>	Partially soluble
<b>Partition Coefficient: n-octanol/water:</b>	No Data Available
<b>Auto-ignition Temperature:</b>	No Data Available
<b>Decomposition Temperature:</b>	No Data Available
<b>Dynamic Viscosity:</b>	No Data Available
<b>Kinematic Viscosity:</b>	No Data Available
<b>Bulk Density:</b>	No Data Available

## 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; Hydrogen cyanide, Nitrogen oxides (NOx), Amines, Hydrogen chloride gas, Hydrogen fluoride, Carbonyl halides, Oxides of phosphorus, Other hazardous decomposition products may be formed.

## 11. Toxicological Information

**Likely Routes of Exposure:** Skin Contact  
Eye Contact  
Inhalation

### Health Effects and Symptoms

**Acute:** Causes serious eye damage with symptoms of eye burns, corneal injury, and possible blindness., Causes skin irritation with symptoms of reddening, itching, and swelling., Vapor can reduce oxygen available for breathing., Vapors can cause temporary corneal edema with symptoms of blurred vision or the appearance of halos around bright objects.

**Chronic:** Not expected to cause adverse chronic health effects.

### **Toxicity Data for: Evercell 2.0**

No data available for this product.

Please find the data available for the components.

#### **Acute Oral Toxicity**

Acute toxicity estimate: 2159 mg/kg (Calculation method)

#### **Acute Dermal Toxicity**

Acute toxicity estimate: > 5000 mg/kg (Calculation method)

### **Toxicity Data for: Polymer**

#### **Toxicity Note**

Toxicity data is based on a similar product.

#### **Acute Oral Toxicity**

LD50: 1500 mg/kg (rat)

#### **Acute Dermal Toxicity**

LD50: 1230 mg/kg (rabbit)

### **Toxicity Data for: Hydrofluorocarbon**

#### **Acute Inhalation Toxicity**

LC50: > 200000 ppm, 4 h, gas (rat)

#### **Acute Dermal Toxicity**

LD50: > 2000 mg/kg (rabbit)

#### **Skin Irritation**

Non-irritating

#### **Eye Irritation**

rabbit, Mild eye irritation

#### **Sensitization**

Skin sensitisation:: non-sensitizer

#### **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)

negative

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

No Teratogenic effects observed at doses tested.

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

##### **Acute Oral Toxicity**

LD50: >= 1150 mg/kg (rat)

##### **Acute Inhalation Toxicity**

LC50: > 7.14 mg/l, 4 h, dust/mist (rat, male/female)

##### **Skin Irritation**

human skin, Patch Test, Non-irritating

human skin, Patch Test, Non-irritating

##### **Eye Irritation**

rabbit, OECD Test Guideline 405, Exposure Time: 24 h, Slightly irritating

##### **Sensitization**

dermal: non-sensitizer (Guinea pig, Maximization Test)

dermal: non-sensitizer (Human, Patch Test)

##### **Repeated Dose Toxicity**

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

13 weeks, oral: NOAEL: 2500 ppm, LOAEL: 800 ppm, (Rat, male, daily)

##### **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.

Genetic Toxicity in Vivo:

Micronucleus test: negative (Mouse, male/female, intraperitoneal)  
negative

##### **Toxicity to Reproduction/Fertility**

Other method, inhalation, daily, (rat, male) Reproductive effects have been observed in animal studies. Two-generation study, (feeding study) oral, daily, (rat, male/female) NOAEL (parental): 85 mg/kg,

##### **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. rat, female, oral, gestation, NOAEL (teratogenicity): 1,000 mg/kg,  
NOAEL (maternal): 1,000 mg/kg,

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

##### **Toxicity Note**

No data available for this component.

##### **Acute Oral Toxicity**

no data available

### **Toxicity Data for: Tertiary Amine**

#### **Acute Oral Toxicity**

LD50: 1182.7 mg/kg (rat, male/female) (OECD Test Guideline 401)

LD50: 1203.2 mg/kg (rat, male) (OECD Test Guideline 401)

LD50: 1220.1 mg/kg (rat, female) (OECD Test Guideline 401)

#### **Acute Inhalation Toxicity**

LC50: 1641 ppm, 4 h, vapour (rat) (OECD Test Guideline 403)

#### **Acute Dermal Toxicity**

LD50: 1370 mg/kg (rabbit)

#### **Skin Irritation**

rabbit, OECD Test Guideline 404, Exposure Time: 4 h, Corrosive

#### **Eye Irritation**

rabbit, Draize, Corrosive

#### **Sensitization**

dermal: sensitizer (Mouse, Mouse local lymphoma assay)

Respiratory sensitization: negative (Human)

Buehler Test: non-sensitizer (Guinea pig)

#### **Repeated Dose Toxicity**

90 Days, inhalation: NOAEL: 24 ppm, (Rat, Male/Female, 6 hrs/day 5 days/week)  
Irritation to lungs and nasal cavity.Reduced body weight gain.

#### **Mutagenicity**

Genetic Toxicity in Vitro:

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

Genetic Toxicity in Vivo:

In vivo micronucleus test: negative (Mouse, male/female, intraperitoneal)  
negative

#### **Carcinogenicity**

Mouse, females, oral, 123 weeksnegative

#### **Toxicity to Reproduction/Fertility**

inhalation, daily, (Rat, Female) NOAEL (parental): 10 ppm, NOAEL (F2): 100 ppm No effects on  
Reproductive parameters observed at doses tested.Fertility Screening, Oral, daily, (rat)

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

rat, female, inhalation, gestation, NOAEL (teratogenicity): 100 ppm, NOAEL (maternal): 10 ppm No  
Teratogenic effects observed at doses tested.  
No fetotoxicity observed at doses tested.

#### **Other Relevant Toxicity Information**



May cause irritation of respiratory tract.

**Toxicity Data for: Tertiary Amine**

**Acute Dermal Toxicity**

LD50: 1919 mg/kg (rabbit)

**Skin Irritation**

rabbit, Severely irritating

**Eye Irritation**

severe irritant

**Mutagenicity**

Genetic Toxicity in Vitro:

Ames test: negative

**Toxicity Data for: Tertiary Amine**

**Acute Oral Toxicity**

LD50: 1630 mg/kg (rat)

**Acute Inhalation Toxicity**

LC50: 308 mg/l, 4 h, vapour (rat)

4 hour test is calculated.

LC50: 290 ppm, 6 h, vapour (rat)

**Acute Dermal Toxicity**

LD50: 234.92 mg/kg (rabbit)

**Skin Irritation**

Severely irritating

**Eye Irritation**

severe irritant

**Other Relevant Toxicity Information**

May cause irritation of respiratory tract.

**Carcinogenicity:**

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

**12. Ecological Information**

**Ecological Data for: Evercell 2.0**

No data available for this product. Please find the data available for the components.

**Ecological Data for Polymer**

**Additional Ecotoxicological Remarks**

No data available for this component.

**Ecological Data for Hydrofluorocarbon**

**Acute and Prolonged Toxicity to Fish**

LC50: > 81.8 mg/l (Rainbow trout (*Salmo gairdneri*), 48 h)

**Acute Toxicity to Aquatic Invertebrates**

EC50: > 97.9 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**

*Cyprinus carpio* (Carp), Exposure time: 42 Days, ca. 0.8 - 2.8 BCF

**Acute and Prolonged Toxicity to Fish**

LC50: ca. 84 mg/l (Bluegill (*Lepomis macrochirus*), 96 h)

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

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

**Acute Toxicity to Aquatic Invertebrates**

EC50: ca. 131 mg/l (Water flea (*Daphnia magna*), 48 h)

**Toxicity to Aquatic Plants**

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

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 h)

**Ecological Data for Tertiary Amine**

**Biodegradation**

aerobic, > 90 %, Exposure time: 13 Days, i.e. readily biodegradable

**Biochemical Oxygen Demand (BOD)**

285 O<sub>2</sub>/g

**Chemical Oxygen Demand (COD)**

485 O<sub>2</sub>/g

**Acute and Prolonged Toxicity to Fish**

LC50: 81 mg/l (Fathead minnow (*Pimephales promelas*), 96 h)

LC50: 100 - 220 mg/l (Golden orfe (*Leuciscus idus*), 96 h)

**Acute Toxicity to Aquatic Invertebrates**

EC50: 98 mg/l (Water flea (*Daphnia magna*), 48 h)

**Toxicity to Aquatic Plants**

EC50: 35 mg/l, (Green algae (*Scenedesmus subspicatus*), 72 h)

**Toxicity to Microorganisms**

EC50: > 8,000 mg/l, (*Pseudomonas putida*, 71 h)

**Ecological Data for Tertiary Amine**

**Additional Ecotoxicological Remarks**

No data available for this component.

**Ecological Data for Tertiary Amine**

**Biodegradation**

Not readily biodegradable.

**Acute and Prolonged Toxicity to Fish**

LC50: 220 mg/l (Golden orfe (*Leuciscus idus*), 96 h)

**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)**

<b>Proper Shipping Name:</b>	Aviation regulated liquid, n.o.s. (contains Hydrofluorocarbon)
<b>Hazard Class or Division:</b>	9
<b>UN number:</b>	UN3334
<b>Packaging Group:</b>	III
<b>Hazard Label(s):</b>	MISCELLANEOUS

**15. Regulatory Information**

**United States Federal Regulations**

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

No substances are subject to TSCA 12(b) export notification requirements.

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

None

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

Acute 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):**

Under RCRA, it is the responsibility of the person who generates a solid waste, as defined in 40 CFR 261.2, to determine if that waste is a hazardous waste.

**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 SDS 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:**

<b><u>Weight percent</u></b>	<b><u>Components</u></b>	<b><u>CAS-No.</u></b>
30 - 60%	Polymer	CAS# is a trade secret
>=1%	Polyester Polyol	CAS# is a trade secret
>=1%	Polyether Polyol	CAS# is a trade secret
5 - 10%	Hydrofluorocarbon	CAS# is a trade secret
3 - 7%	Chlorinated Phosphate Ester	CAS# is a trade secret
>=1%	Brominated Aromatic Polyalcohol	CAS# is a trade secret
1 - 5%	Polyether Polyol	CAS# is a trade secret
1 - 5%	Tertiary Amine	CAS# is a trade secret
0.1 - 1%	Tertiary Amine	CAS# is a trade secret
0.1 - 1%	Tertiary Amine	CAS# is a trade secret

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

<b><u>Weight percent</u></b>	<b><u>Components</u></b>	<b><u>CAS-No.</u></b>
1 - 5%	Tertiary Amine	CAS# is a trade secret
0.1 - 1%	Ethylene Glycol	107-21-1

**Pennsylvania Right to Know Special Hazard Substance List:**

<b><u>Weight percent</u></b>	<b><u>Components</u></b>	<b><u>CAS-No.</u></b>
<0.1%	Formaldehyde	50-00-0
<0.1%	1,4-Dioxane	123-91-1

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

<b><u>Weight percent</u></b>	<b><u>Components</u></b>	<b><u>CAS-No.</u></b>
<0.1%	Formaldehyde	50-00-0
<0.1%	1,4-Dioxane	123-91-1

**CFATS (Chemical Facility Anti-Terrorism Standards) Chemicals**

To the best of our knowledge, this product does not contain Appendix A Chemicals of Interest (COI), at or above the Screening Threshold Quantity (STQ), as defined by the Department of Homeland Security Chemical Facility Anti-terrorism Standard (CFATS, 6 CFR Part 27.

Based on information provided by our suppliers, this product is considered "DRC Conflict Free" as defined by the SEC Conflict Minerals Final Rule (Release No. 34-67716; File No. S7-40-10; Date: 2012-08-22).

#### **16. Other Information**

The method of hazard communication for Everest Systems LLC is comprised of product labels and safety data sheets. Safety data sheets for all of our products and general product declarations are available for download at [www.everestsystemsco.com](http://www.everestsystemsco.com).

Contact:	Product Safety Department
Telephone:	800-575-8966
SDS Number:	112000031324
Version Date:	06/06/2016
SDS Version:	4.0

This information is furnished without warranty, express or implied. This information is believed to be accurate to the best knowledge of Everest Systems LLC. The information in this SDS relates only to the specific material designated herein. Everest Systems LLC assumes no legal responsibility for use of or reliance upon the information in this SDS.

|| Changes since the last version are highlighted in the margin. This version replaces all previous versions.