

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: DePsipher™

Product Code: 6300-100-01

1.2. Intended Use of the Product

No use is specified

1.3. Name, Address, and Telephone of the Responsible Party

Company

Trevigen Inc.
 8405 Helgerman Court
 20877 Gaithersburg, MD 20877
 T 1-800-TREVIGEN

1.4. Emergency Telephone Number

Emergency Number : 301-216-2800

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

Classification (GHS-US)

Flam. Liq. 4 H227

Full text of H-phrases: see section 16

2.2. Label Elements

GHS-US Labeling

Signal Word (GHS-US) : Warning

Hazard Statements (GHS-US) : H227 - Combustible liquid.

Precautionary Statements (GHS-US) : P210 - Keep away from extremely high or low temperatures, ignition sources, and incompatible materials. - No smoking.
 P280 - Wear protective gloves, protective clothing, and eye protection.
 P370+P378 - In case of fire: Use appropriate media (see section 5) to extinguish.
 P403+P235 - Store in a well-ventilated place. Keep cool.
 P501 - Dispose of contents/container in accordance with local, regional, national, provincial, territorial, and international regulations.

2.3. Other Hazards

Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

May enhanced skin absorption of toxic materials.

2.4. Unknown Acute Toxicity (GHS-US) No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Not applicable

3.2. Mixture

Name	Product Identifier	% (w/w)	Classification (GHS-US)
Dimethyl sulfoxide	(CAS No) 67-68-5	99.75	Flam. Liq. 4, H227

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).

Inhalation: Remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.

Skin Contact: Flush with plenty of water for at least 5 minutes. Seek medical advice if irritation develops or persists.

DePsipher™

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations

Eye Contact: Rinse cautiously with water for at least 5 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists.

Ingestion: Do not induce vomiting. Rinse mouth. Seek medical attention.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

General: Not expected to present a significant hazard under anticipated conditions of normal use. May accelerate skin absorption of other materials.

Inhalation: May cause respiratory irritation.

Skin Contact: May cause skin irritation. May enhanced skin absorption of toxic materials.

Eye Contact: May cause eye irritation.

Ingestion: Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: Not available

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Water spray, fog, carbon dioxide (CO₂), alcohol-resistant foam, or dry chemical.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Combustible liquid.

Explosion Hazard: May form flammable/explosive vapor-air mixture above 87°C . Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

Reactivity: Reacts violently with strong oxidizers. Increased risk of fire or explosion. Reacts violently with incompatible materials to form other toxic and explosive materials.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire. Vapors are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapors. Under fire conditions, hazardous fumes will be present. Under fire conditions closed containers may rupture or explode.

Firefighting Instructions: Do not breathe fumes from fires or vapors from decomposition. Use water spray or fog for cooling exposed containers. Closed containers exposed to heat may explode. Do not allow run-off from firefighting to enter drains or water sources.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon oxides (CO, CO₂). Sulfur oxides. Nitrogen oxides. Hydrogen chloride. Hydrogen iodide. Toxic fumes. Poisonous gases.

Reference to Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Avoid breathing vapors, mist, or spray. Avoid contact with skin, eyes, or clothing. Use special care to avoid static electric charges. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

6.2. Environmental Precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and Material for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

DePsipher™

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Absorb and/or contain spill with inert material, then place in suitable container. Do not take up in combustible material such as: saw dust or cellulosic material. Use only non-sparking tools. Contact competent authorities after a spill.

6.4. Reference to Other Sections

See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: Avoid contact with skin, eyes and clothing. Keep away from heat, sparks, open flames, hot surfaces. – No smoking. Handle empty containers with care because residual vapors are flammable.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Ensure adequate ventilation. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof electrical, ventilating, and lighting equipment. Comply with applicable regulations.

Storage Conditions: Store in a dry, cool, and well-ventilated place. Keep container closed when not in use. Keep/Store away from direct sunlight, extremely high or low temperatures, and incompatible materials.

Incompatible Materials: Strong oxidizers. Reducing agents. Strong acids. Halides. Boron compounds. Metal salts of oxoacids (such as aluminium perchlorate, sodium perchlorate, and iron (III) nitrate).

7.3. Specific End Use(s)

No use is specified.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

8.2. Exposure Controls

Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide sufficient ventilation to keep vapors below permissible exposure limit. Proper grounding procedures to avoid static electricity should be followed. Gas detectors should be used when flammable gases or vapors may be released. Ensure all national/local regulations are observed.

Personal Protective Equipment: Protective goggles. Protective clothing. Gloves.



Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Impermeable protective gloves.

Eye Protection: Chemical safety goggles.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn.

Environmental Exposure Controls: Do not allow the product to be released into the environment.

Consumer Exposure Controls: Do not eat, drink, or smoke during use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: Not available
Odor	: Not available
Odor Threshold	: Not available
pH	: Not available
Evaporation Rate	: Not available
Melting Point	: 18.5 °C (65.3 °F) (Methyl sulphoxide)

DePsipher™

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations

Freezing Point	: Not available
Boiling Point	: 189 °C (372.2 °F) (Methyl sulphoxide)
Flash Point	: 87 °C (188.6 °F) Closed Cup (Methyl sulphoxide)
Auto-ignition Temperature	: 215 °C (419 °F) (Methyl sulphoxide)
Decomposition Temperature	: Not available
Flammability (solid, gas)	: Not available
Lower Flammable Limit	: 2.6 % (Methyl sulphoxide)
Upper Flammable Limit	: 42 % (Methyl sulphoxide)
Vapor Pressure	: Not available
Relative Vapor Density at 20 °C	: Not available
Relative Density	: Not available
Specific Gravity	: 1.1 (Methyl sulphoxide)
Solubility	: Water: Miscible (Methyl sulphoxide)
Partition Coefficient: N-Octanol/Water	: Not available
Viscosity	: Not available
Explosion Data – Sensitivity to Mechanical Impact	: Not expected to present an explosion hazard due to mechanical impact
Explosion Data – Sensitivity to Static Discharge	: Not expected to present an explosion hazard due to static discharge

SECTION 10: STABILITY AND REACTIVITY

- 10.1. Reactivity:** Reacts violently with strong oxidizers. Increased risk of fire or explosion. Reacts violently with incompatible materials to form other toxic and explosive materials.
- 10.2. Chemical Stability:** Stable under recommended handling and storage conditions (see section 7).
- 10.3. Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.
- 10.4. Conditions to Avoid:** Direct sunlight. Extremely high or low temperatures. Ignition sources. Incompatible materials.
- 10.5. Incompatible Materials:** Strong oxidizers. Reducing agents. Strong acids. Halides. Boron compounds. Metal salts of oxoacids (such as aluminum perchlorate, sodium perchlorate, and iron (III) nitrate).
- 10.6. Hazardous Decomposition Products:** Thermal decomposition generates: Carbon oxides (CO, CO₂). Sulfur oxides. Nitrogen oxides. Hydrogen chloride. Hydrogen iodide. Toxic fumes. Poisonous gases.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects - Product

Acute Toxicity: Not classified

LD50 and LC50 Data: Not available

Skin Corrosion/Irritation: Not classified

Serious Eye Damage/Irritation: Not classified

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Teratogenicity: Not classified

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: May cause respiratory irritation

Symptoms/Injuries After Skin Contact: May cause mild skin irritation

Symptoms/Injuries After Eye Contact: May cause eye irritation

Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects

11.2. Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

Dimethyl sulfoxide (67-68-5)	
LD50 Oral Rat	> 20000 mg/kg
LD50 Dermal Rat	≈ 40000 mg/kg

DePsipher™

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity Not classified

Dimethyl sulfoxide (67-68-5)	
LC50 Fish 1	34 g/l (Exposure time: 96 h - Species: Pimephales promelas)
LC 50 Fish 2	33 - 37 g/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])

12.2. Persistence and Degradability Not available

12.3. Bioaccumulative Potential

Dimethyl sulfoxide (67-68-5)	
Log Pow	-2.03

12.4. Mobility in Soil Not available

12.5. Other Adverse Effects Not available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Sewage Disposal Recommendations: Do not empty into drains; dispose of this material and its container in a safe way.

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial, and international regulations.

Additional Information: Handle empty containers with care because residual vapors are flammable.

SECTION 14: TRANSPORT INFORMATION

14.1. In Accordance with DOT

Proper Shipping Name : COMBUSTIBLE LIQUID, N.O.S.(Contains Methyl sulphoxide)
Identification Number : NA1993
Packing Group : III
ERG Number : 128

14.2. In Accordance with IMDG Not regulated for transport

14.3. In Accordance with IATA Not regulated for transport

14.4. In Accordance with TDG Not regulated for transport

SECTION 15: REGULATORY INFORMATION


15.1. US Federal Regulations

DePsipher™	
SARA Section 311/312 Hazard Classes	Fire hazard
Dimethyl sulfoxide (67-68-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
SARA Section 311/312 Hazard Classes	Fire hazard

15.2. US State Regulations

Dimethyl sulfoxide (67-68-5)	
U.S. - New Jersey - Right to Know Hazardous Substance List	

15.3. Canadian Regulations

DePsipher™	
WHMIS Classification	Class B Division 3 - Combustible Liquid
	
Dimethyl sulfoxide (67-68-5)	
Listed on the Canadian DSL (Domestic Substances List)	
Listed on the Canadian IDL (Ingredient Disclosure List)	
IDL Concentration 1 %	

DePsipher™

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations

WHMIS Classification	Class B Division 3 - Combustible Liquid
----------------------	---

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date : 04/24/2015

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

Flam. Liq. 4	Flammable liquids Category 4
H227	Combustible liquid

Party Responsible for the Preparation of This Document

Trevigen INC. 8405 Helgerman Court Gaithersburg, MD 20877 T: 301-216-2800

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

North America GHS US 2012 & WHMIS 2