

Safety Data Sheet

Issue Date: 20-Feb-2013

Revision Date: 14-Aug-2024

Version 2

1. IDENTIFICATION

Product identifier

Product Name UV-87

Other means of identification

SDS # UO-004

Recommended use of the chemical and restrictions on use

Recommended Use Optics Coating.

Details of the supplier of the safety data sheet

Manufacturer Address

Ultra Optics Company
9200 Wyoming Avenue N.
Suite 360
Brooklyn Park, MN 55455

Emergency telephone number

Company Phone Number 1-800-365-9993
Emergency Telephone INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance Clear pale yellow liquid

Physical state Liquid

Odor Moderate solvent odor

Classification

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 4
Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Reproductive toxicity	Category 2
Flammable liquids	Category 4

Signal Word

Danger

Hazard statements

Harmful if swallowed
Harmful in contact with skin
Causes severe skin burns and eye damage
May cause an allergic skin reaction
Suspected of damaging fertility or the unborn child
Combustible liquid



Precautionary Statements - Prevention

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Wear protective gloves/protective clothing/eye protection/face protection
 Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Do not breathe dusts or mists
 Contaminated work clothing must not be allowed out of the workplace
 Keep away from flames and hot surfaces. - No smoking

Precautionary Statements - Response

Immediately call a POISON CENTER or doctor
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 Immediately call a POISON CENTER or doctor
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower
 Wash contaminated clothing before reuse
 If skin irritation or rash occurs: Get medical advice/attention
 IF INHALED: Remove person to fresh air and keep comfortable for breathing
 Immediately call a POISON CENTER or doctor
 IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell
 Rinse mouth
 Do NOT induce vomiting
 IN CASE OF FIRE: Use CO2, dry chemical, or foam to extinguish

Precautionary Statements - Storage

Store locked up
 Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other hazards

Toxic to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No	Weight-%
2-Propenoic acid, 1,4-butanediyl ester	1070-70-8	30-60
(3-Glycidyloxypropyl)trimethoxysilane	2530-83-8	30-60
1,6-Hexanediol diacrylate	13048-33-4	10-30
Propylene carbonate	108-32-7	1-5
Diphenyl(4-phenylthio)phenylsulfonium Hexafluoroantimonate	71449-78-0	0.1-1
Octamethylcyclotetrasiloxane	556-67-2	0.1-1

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

General Advice	Immediately call a poison center or doctor/physician.
Eye Contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.
Skin Contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention.
Inhalation	Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center or doctor/physician.
Ingestion	Call a poison center or doctor/physician if you feel unwell. Rinse mouth. Do NOT induce vomiting.

Most important symptoms and effects, both acute and delayed

Symptoms	Harmful if swallowed. Harmful in contact with skin. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Suspected of damaging fertility or the unborn child.
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Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically.
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use CO₂, dry chemical, or foam for extinction.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

Combustible material.

Hazardous combustion products Carbon oxides.

Explosion Data**Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Use personal protective equipment as required.

Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up Contain spilled material using absorbent material. Place absorbent material in clean container.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing and eye/face protection. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe dusts or mists. Contaminated work clothing must not be allowed out of the workplace. Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

Conditions for safe storage, including any incompatibilities

Storage Conditions Store locked up. Store in a well-ventilated place. Keep cool.

Incompatible Materials Strong oxidizers. Water. Inert gases. Amines. Alkali.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Diphenyl(4-phenylthio)phenylsulfonium Hexafluoroantimonate 71449-78-0	TWA: 0.5 mg/m ³ Sb	TWA: 0.5 mg/m ³ Sb (vacated) TWA: 0.5 mg/m ³ Sb	IDLH: 50 mg/m ³ Sb TWA: 0.5 mg/m ³ Sb

Appropriate engineering controls

Engineering Controls Apply technical measures to comply with the occupational exposure limits. Showers. Eyewash stations. Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Wear appropriate chemical goggles. Refer to 29 CFR 1910.133 for eye and face protection regulations.

Skin and Body Protection Wear suitable protective clothing. Refer to 29 CFR 1910.138 for appropriate skin and body protection.

Respiratory Protection If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn. Refer to 29 CFR 1910.134 for respiratory protection requirements.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid	Odor	Moderate solvent odor
Appearance	Clear pale yellow liquid	Odor Threshold	Not determined
Color	Pale yellow		
<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>	
pH	No data available		
Melting point / freezing point	No data available		
Initial boiling point and boiling range	No data available		
Flash point	> 60 °C / 140 °F		
Evaporation Rate	Not determined		
Flammability (Solid, Gas)	Not determined		
Flammability Limit in Air			
Upper flammability or explosive limits	No data available		
Lower flammability or explosive limits	No data available		
Vapor Pressure	Not determined		
Vapor Density	No data available		
Relative Density	Not determined		
Water Solubility	Not determined		
Solubility in other solvents	Not determined		
Partition Coefficient	Not determined		
Autoignition temperature	No data available		
Decomposition temperature	Not determined		
Kinematic viscosity	Not determined		
Dynamic Viscosity	Not determined		
Explosive Properties	Not determined		
Oxidizing Properties	Not determined		

Other information

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Hazardous Polymerization

Hazardous polymerization does not occur.

Conditions to Avoid

Excessive heat.

Incompatible materials

Strong oxidizers. Water. Inert gases. Amines. Alkali.

Hazardous decomposition products

Carbon oxides. By-products undetermined.

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure****Product Information****Eye Contact** Avoid contact with eyes.**Skin Contact** Harmful in contact with skin.**Inhalation** Do not inhale.**Ingestion** Harmful if swallowed.**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
2-Propenoic acid, 1,4-butanediyl ester 1070-70-8	= 587 mg/kg (Rat)	400 - 800 mg/kg (Rat)	> 0.06 mg/L (Rat) 8 h
(3-Glycidyloxypropyl)trimethoxysilane 2530-83-8	= 7.01 g/kg (Rat)	= 3.97 mL/kg (Rabbit)	> 5.3 mg/L (Rat) 4 h
1,6-Hexanediol diacrylate 13048-33-4	= 5 g/kg (Rat)	= 3600 mg/kg (Rabbit)	-
Propylene carbonate 108-32-7	= 29000 mg/kg (Rat)	> 3000 mg/kg (Rabbit)	-
Octamethylcyclotetrasiloxane 556-67-2	= 1540 mg/kg (Rat)	> 2375 mg/kg (Rat)	= 36 mg/L (Rat) 4 h

Symptoms related to the physical, chemical and toxicological characteristics**Symptoms** Please see section 4 of this SDS for symptoms.**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Skin corrosion/irritation** Causes severe skin burns.**Serious eye damage/eye irritation** Causes severe eye damage.**Sensitization** May cause an allergic skin reaction.**Carcinogenicity** Based on the information provided, this product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Reproductive toxicity

Suspected of damaging fertility or the unborn child.

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

Oral LD50 1,163.40 mg/kg

Dermal LD50 1,771.20 mg/kg

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Toxic to aquatic life with long lasting effects.

Component Information

Chemical name	Algae/aquatic plants	Fish	Crustacea
(3-Glycidyloxypropyl)trimethoxysilane 2530-83-8		LC50: =55mg/L (96h, Cyprinus carpio)	
Propylene carbonate 108-32-7	EC50: >500mg/L (72h, Desmodesmus subspicatus)	LC50: >1000mg/L (96h, Cyprinus carpio)	EC50: >500mg/L (48h, Daphnia magna)
Octamethylcyclotetrasiloxane 556-67-2		LC50: >500mg/L (96h, Brachydanio rerio) LC50: >1000mg/L (96h, Lepomis macrochirus)	

Persistence/Degradability

Not determined.

Bioaccumulation

There is no data for this product.

Mobility

Chemical name	Partition coefficient
2-Propenoic acid, 1,4-butanediyl ester 1070-70-8	1.9
1,6-Hexanediol diacrylate 13048-33-4	2.81
Propylene carbonate 108-32-7	0.48
Diphenyl(4-phenylthio)phenylsulfonium Hexafluoroatimonate 71449-78-0	-0.426
Octamethylcyclotetrasiloxane 556-67-2	6.488

Other adverse effects

Not determined

13. DISPOSAL CONSIDERATIONS**Waste Treatment Methods****Disposal of Wastes**

Disposal should be in accordance with applicable regional, national and local laws and

regulations.

Contaminated Packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations.

California Hazardous Waste Status

Chemical name	California Hazardous Waste Status
Diphenyl(4-phenylthio)phenylsulfonium Hexafluoroatimonate 71449-78-0	Toxic

14. TRANSPORT INFORMATION

Note

Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT

Please contact manufacturer for most current information

IATA

Please contact manufacturer for most current information

IMDG

Please contact manufacturer for most current information

15. REGULATORY INFORMATION

International Inventories

Chemical name	TSCA	TSCA Inventory Status	DSL/NDSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AICS
2-Propenoic acid, 1,4-butanediyl ester	X	ACTIVE	X	X	X	X	X	X	X
(3-Glycidyloxypropyl)trimethoxy silane	X	ACTIVE	X	X	X	X	X	X	X
1,6-Hexanediol diacrylate	X	ACTIVE	X	X	X	X	X	X	X
Propylene carbonate	X	ACTIVE	X	X	X	X	X	X	X
Diphenyl(4-phenylthio)phenylsulfonium Hexafluoroatimonate	X	ACTIVE	X		X	X		X	X
Octamethylcyclotetrasiloxane	X	ACTIVE	X	X	X	X	X	X	X

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

CWA (Clean Water Act)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Diphenyl(4-phenylthio)phenylsulfonium Hexafluoroantimonate		X		

US State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Diphenyl(4-phenylthio)phenylsulfonium Hexafluoroantimonate 71449-78-0	X		X

16. OTHER INFORMATION

NFPA**Health hazards**

-

Flammability

-

Instability

-

Special hazards

-

HMIS**Health hazards**

-

Flammability

-

Physical hazards

-

Personal Protection

Not determined

Issue Date:

20-Feb-2013

Revision Date:

14-Aug-2024

Revision Note:

Updated formula

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet