

**Safety Data Sheet**  
*acc. to OSHA HCS*

Printing date 01/06/2023

Reviewed on 01/06/2023

**1 Identification**

- **Product identifier**
- **Trade name:** *Ultradent™ LC Block-Out Resin*
- **Article number:** *SDS 30-001.13, 10318*
- **Application of the substance / the mixture** *Dental Laboratory Resin*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
*Ultradent Products Inc.  
505 W. Ultradent Drive (10200 S)  
South Jordan, UT 84095-3942  
USA  
onlineordersupport@ultradent.com*
- **Information department:** *Customer Service*
- **Emergency telephone number:**  
*CHEMTREC (NORTH AMERICA) : (800) 424-9300  
(INTERNATIONAL) : +(703) 527-3887*

**2 Hazard(s) identification**

- **Classification of the substance or mixture**



*Sensitization - Skin 1 H317 May cause an allergic skin reaction.*

- **Label elements**
- **GHS label elements** *The product is classified according to the Globally Harmonized System (GHS)*
- **Hazard pictograms** *GHS07*
- **Signal word** *Warning*
- **Health Hazard-determining components of labeling:**  
*Diurethane Dimethacrylate  
Triethylene Glycol Dimethacrylate  
Amine Methacrylate*
- **Hazard statements**  
*H317 May cause an allergic skin reaction.*
- **Precautionary statements**
  - P261 Avoid breathing dust/fume/gas/mist/vapors/spray*
  - P272 Contaminated work clothing must not be allowed out of the workplace.*
  - P280 Wear protective gloves.*
  - P302+P352 If on skin: Wash with plenty of water.*
  - P333+P313 If skin irritation or rash occurs: Get medical advice/attention.*
  - P321 Specific treatment (see on this label).*
  - P363 Wash contaminated clothing before reuse.*
  - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.*

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· **Classification system:**· **NFPA ratings (scale 0 - 4)**· **HMIS-ratings (scale 0 - 4)**

HEALTH	0	Health = 0
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

### 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**· **Description:** Mixture of the substances listed below with nonhazardous additions.· **Dangerous components:**

72869-86-4	Diurethane Dimethacrylate	>60-<80%
109-16-0	Triethylene Glycol Dimethacrylate	>10-<30%
	Silicon Dioxide Chemically Prepared	>1-<10%
	Amine Methacrylate	<1%

· **Additional information:**

The specific chemical identity of composition is being withheld as a trade secret. The specific chemical identity is made available to health professionals, employees, and designated representatives in accordance with the applicable provisions of paragraph §1910.1200.

### 4 First-aid measures

· **Description of first aid measures**· **After inhalation:**

This product is a viscous gel, therefore chance of inhalation is extremely low.

Seek medical treatment in case of complaints.

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.· **After eye contact:** Rinse opened eye for several minutes under running water.· **After swallowing:**

Rinse out mouth and then drink plenty of water.

Seek medical treatment.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

### 5 Fire-fighting measures

· **Extinguishing media**· **Suitable extinguishing agents:**

Water spray

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Foam

Fire-extinguishing powder

Use fire fighting measures that suit the environment.

- **Special hazards arising from the substance or mixture**

Carbon monoxide (CO)

Nitrogen oxides (NOx)

During fire, gases hazardous to health may be formed.

- **Advice for firefighters**

- **Protective equipment:** Wear fully protective suit.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.

- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

- **Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

- **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## 7 Handling and storage

- **Handling:**

- **Precautions for safe handling**

Keep receptacles tightly sealed.

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

- **Information about protection against explosions and fires:** No special measures required.

- **Conditions for safe storage, including any incompatibilities**

- **Storage:**

- **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.

- **Information about storage in one common storage facility:**

Store away from oxidizing agents.

Store away from foodstuffs.

- **Further information about storage conditions:** See product labelling.

- **Specific end use(s)** Dental Laboratory Resin

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

At this time, the other constituents have no known exposure limits.

<b>Silicon Dioxide Chemically Prepared</b>	
<b>TWA</b>	Short-term value: 0.8 mg/m <sup>3</sup>

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· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Do not eat or drink while working.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material is based on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Goggles recommended during refilling.

· **Body protection:** Protective work clothing

## 9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Medium Viscosity

Color: Blue

· **Odor:** Methacrylate

· **Odor threshold:** Not determined.

· **pH-value:** Not applicable (non-aqueous)

· **Change in condition**

Melting point/Melting range: <25 °C

Boiling point/Boiling range: >100 °C

· **Flash point:** Not applicable

· **Flammability (solid, gaseous):** Not applicable.

· **Decomposition temperature:** 260 °C (TGA trace)

· **Auto igniting:** Product is not selfigniting.

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· <b>Danger of explosion:</b>	<i>Product does not present an explosion hazard.</i>
· <b>Explosion limits:</b>	
<b>Lower:</b>	<i>Not determined.</i>
<b>Upper:</b>	<i>Not determined.</i>
· <b>Vapor pressure:</b>	<i>Not determined.</i>
· <b>Density at 20 °C:</b>	<i>1.1-1.2 g/cm<sup>3</sup></i>
· <b>Relative density</b>	<i>Not determined</i>
· <b>Vapor density</b>	<i>Not determined.</i>
· <b>Evaporation rate</b>	<i>Not determined.</i>
· <b>Solubility in / Miscibility with</b>	
<b>Water:</b>	<i>Not miscible or difficult to mix.</i>
· <b>Partition coefficient (n-octanol/water):</b>	<i>Not determined.</i>
· <b>Viscosity:</b>	
<b>Dynamic:</b>	<i>Not determined.</i>
<b>Kinematic:</b>	<i>Not determined</i>
· <b>Other information</b>	<i>No further relevant information available.</i>

## 10 Stability and reactivity

- **Reactivity** *No further relevant information available.*
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** *No decomposition if used according to specifications.*
- **Possibility of hazardous reactions** *No dangerous reactions known.*
- **Conditions to avoid**
- Light*
- UV light*
- **Incompatible materials:** *Strong oxidizing agents*
- **Hazardous decomposition products:** *No dangerous decomposition products known.*

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· <b>LD/LC50 values that are relevant for classification:</b>		
<b>72869-86-4 Diurethane Dimethacrylate</b>		
Oral	LD50	>5,000 mg/kg (rat)
<b>109-16-0 Triethylene Glycol Dimethacrylate</b>		
Oral	LD50	>5,000 mg/kg (rat)
	LC50 Fish	16.4 mg/l (Fish) (Toxicity to fish)
Dermal	LD50	>2,000 mg/kg (mouse)
<b>Silicon Dioxide Chemically Prepared</b>		
Oral	LD50	>15,000 mg/kg (mouse)
		>3,300 mg/kg (rat)
	LC50 Fish	>10,000 mg/l (Fish) (Toxicity to fish)

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Dermal	LD50	>5,000 mg/kg (rabbit)
Inhalative	LC50/4 h	0.139 mg/l (rat)
<b>Amine Methacrylate</b>		
Oral	LD50	1,550 mg/kg (rat)
	LC50 Fish	19 mg/l (Fish)
Dermal	LD50	2,000 mg/kg (rabbit)
Inhalative	LC50/4 h	96 mg/l (rat)

- **Primary irritant effect:**

- **on the skin:** No irritant effect.

- **on the eye:** No irritating effect.

- **Sensitization:** Sensitization possible through skin contact.

- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:  
Irritant

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

1345-16-0	Dark Blue Pigment	2B
68186-87-8	Cobalt Zinc Aluminate Blue Spinel	2B
68186-85-6	Cobalt Titanate Green Spinel	2B

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

## 12 Ecological information

- **Toxicity**

- **Aquatic toxicity:**

<b>72869-86-4 Diurethane Dimethacrylate</b>	
EC50	>0.6 mg/kg (Algae)
Biodegradability	28 days (Aerobic) (Biodegradability testing)
<b>109-16-0 Triethylene Glycol Dimethacrylate</b>	
EC50	>100 mg/kg (Algae)
Biodegradability	28 days (Aerobic) (Biodegradability testing)
Aqua toxicity	32 mg/l (daphnia) (No Observed Effect Concentration)
<b>Silicon Dioxide Chemically Prepared</b>	
EC50	>1,000 mg/kg (daphnia)
<b>Amine Methacrylate</b>	
EC50	42 mg/kg (Algae)

- **Persistence and degradability** No further relevant information available.

- **Behavior in environmental systems:**

- **Bioaccumulative potential** No further relevant information available.

- **Mobility in soil** No further relevant information available.

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- **Additional ecological information:**
- **General notes:**  
*Water hazard class 1 (Self-assessment): slightly hazardous for water*  
*Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.*
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
*Dispose of contents/container in accordance with international, federal, state, and local regulations.*
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

<b>· UN-Number</b>	
<b>· DOT, IMDG, IATA</b>	Not Regulated
<b>· UN proper shipping name</b>	
<b>· DOT, IMDG, IATA</b>	Not Regulated
<b>· Transport hazard class(es)</b>	
<b>· DOT, ADN, IMDG, IATA</b>	
<b>· Class</b>	Not Regulated
<b>· Packing group</b>	
<b>· DOT, IMDG, IATA</b>	Not Regulated
<b>· Environmental hazards:</b>	Not Applicable.
<b>· Special precautions for user</b>	Not Applicable
<b>· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not Applicable.
<b>· UN "Model Regulation":</b>	Not Regulated

## 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**  
*No further relevant information available.*
- **Sara**

<b>· Section 355 (extremely hazardous substances):</b>	
<i>None of the ingredients is listed.</i>	
<b>· Section 313 (Specific toxic chemical listings):</b>	
	Trade Secret
1345-16-0	Dark Blue Pigment

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68186-87-8	Cobalt Zinc Aluminate Blue Spinel	
68186-85-6	Cobalt Titanate Green Spinel	
<b>· TSCA (Toxic Substances Control Act):</b>		
72869-86-4	Diurethane Dimethacrylate	ACTIVE
109-16-0	Triethylene Glycol Dimethacrylate	ACTIVE
	Amine Methacrylate	ACTIVE
<b>· Hazardous Air Pollutants</b>		
1345-16-0	Dark Blue Pigment	
68186-87-8	Cobalt Zinc Aluminate Blue Spinel	
68186-85-6	Cobalt Titanate Green Spinel	
<b>· Proposition 65</b>		
<b>· Chemicals known to cause cancer:</b>		
None of the ingredients is listed.		
<b>· Chemicals known to cause reproductive toxicity for females:</b>		
None of the ingredients is listed.		
<b>· Chemicals known to cause reproductive toxicity for males:</b>		
None of the ingredients is listed.		
<b>· Chemicals known to cause developmental toxicity:</b>		
None of the ingredients is listed.		
<b>· Carcinogenic categories</b>		
<b>· EPA (Environmental Protection Agency)</b>		
None of the ingredients is listed.		
<b>· ACGIH Carcinogenicity (American Conference of Governmental Industrial Hygienists)</b>		
Trade Secret		A4
<b>· NIOSH-Ca (National Institute for Occupational Safety and Health)</b>		
None of the ingredients is listed.		
<b>· Chemical safety assessment:</b>		
Device is biocompatible when used as directed by dental professionals per ISO 10993-1		

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** Environmental, Health, and Safety
- **Contact:** Customer Service
- **Date of preparation / last revision** 01/06/2023 / -
- **Abbreviations and acronyms:**  
 IMDG: International Maritime Code for Dangerous Goods  
 DOT: US Department of Transportation  
 IATA: International Air Transport Association  
 EINECS: European Inventory of Existing Commercial Chemical Substances  
 ELINCS: European List of Notified Chemical Substances  
 CAS: Chemical Abstracts Service (division of the American Chemical Society)  
 NFPA: National Fire Protection Association (USA)  
 HMIS: Hazardous Materials Identification System (USA)  
 LC50: Lethal concentration, 50 percent  
 LD50: Lethal dose, 50 percent  
 PBT: Persistent, Bioaccumulative and Toxic

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vPvB: very Persistent and very Bioaccumulative  
NIOSH: National Institute for Occupational Safety  
OSHA: Occupational Safety & Health  
TLV: Threshold Limit Value  
PEL: Permissible Exposure Limit  
REL: Recommended Exposure Limit  
Sensitization - Skin 1: Skin sensitisation – Category 1  
· **\* Data compared to the previous version altered.**

US